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The Rural School Problem.

By FLORENCE BURLINGAME, Minnesota.

Despite the rapid growth in our urban population which has been so noticeable during the last two decades the report of the latest census shows that at least two-thirds of the people of the United States still live remote from the larger centers of population, upon isolated farms or in small mining and fishing villages. It would seem, therefore, that two-thirds of the children of the United States must depend, for that part of their education which is to be gained from books and school-life, mainly upon the common district school. This being the case, it is a matter of the utmost importance that these schools, the main or sole dependence of ten millions of school-children, are brought up to, and kept at, the highest possible point of efficiency and usefulness. Let it be freely admitted that most cities and towns have schools of which they are justly proud, for whose improvement they are most zealous; that the higher institutions are doing well a most important work. The fact remains that the town school reaches only the minority of our future citizens, that the great majority begin and end their school life within the walls of the district school-house, and are affected only in an indirect way by the influence of the higher institutions. In view of this it is well to look closely into the conditions and problems of the rural schools, to examine closely into the causes of existing deficiencies and to search for means of possible improvement.

Reference is here made more particularly to the Northern and Western states; states where public sentiment is clearly and forcibly on the side of the schools; states where liberal appropriations are made for their support, and where the first act of a newly organized community is the selection of a site and the erection of a school-house. What is the actual condition of the rural school in these states as regards efficiency? The statements here presented are based upon personal observation in four of these states, confirmed by official and unofficial reports and by the observation of others, and I think will be accepted without question as a fair statement of the facts.

Attendance.

The attendance in rural schools is uniformly poor. Many especially of the older children do not attend at all. Of those enrolled, very few attend regularly. Where compulsory school laws exist, they are often evaded or disregarded and at best compel attendance but for short terms. Often the teacher's report may show that half of those enrolled have failed to attend the required time. A conservative estimate would place the average attendance of the pupils enrolled no higher than at from three to four months per year, even in the most favored localities.

Progress of Pupils.

The grade of scholarship is relatively low. In part this is a natural consequence of the first condition. Pupils are uniformly from one to two or three years behind those of the same age in city schools. Their progress is less rapid, the range of their attainments narrower. In opposition to this it is sometimes claimed that many of our best scholars, statesmen, and business men have come out of these same rural schools, and that pupils com-

ing from them to enter the high school show themselves superior in thinking power to those brought up in the city school. While such superiority is doubtless often a fact, it may well be doubted if it can be claimed as an effect of the district school. The boy who *comes out* of that school into a larger field of intellectual activity is the boy whose natural strength and vigor of intellect have rendered him even more superior to those he has left behind than to those with whom he now comes in contact. The boy who "comes out" is the one for whom we need have little or no care: he will take care of himself. But for the ninety and nine who never "come out," who lack the strength or the ambition to raise themselves above their environment, what of them? It is to them our kindest care is due, and they in the country school are not giving evidence that they have received that care in equal measure with their city cousins.

Not Held in High Esteem.

The rural school holds a low place in the popular estimation. The town may boast of its schools, the district seldom does. Let a child show talent or studiousness beyond the common, and his thoughts turn toward the city school. If his parents become ambitious for him, if they wish him to have "a good education," they strive to send him away to "town school" even before he has reached a degree of attainment which makes high school work necessary, or an age which renders even temporary absence from home desirable. Many a family gives up a pleasant farm home and a profitable employment to move into town amid much inferior surroundings that the children may "go to school." And this prejudice against the district school is shared fully by the teachers themselves and is confirmed in the minds of the public by the attitude of the teachers toward it.

The teachers of our district schools are of all grades and all degrees of capacity, but they may be said to have one common characteristic, lack of permanency in office, and often even lack of desire for permanency. In the city the school teacher expects, as the reward of a successful year's work, a re-engagement, and as such strives to hold her place as long as possible. In the country school the teacher is usually engaged by the term and seldom remains long in the same school. If she fails she is dismissed at the end of the term, if she is successful she may remain for two or three terms, seldom more; then she looks forward to some better position, if possible in village or town and her place is taken by another. The better teachers inevitably gravitate toward the cities, leaving the country schools to the less successful, or to new and untried teachers who are to get their experience and training in the rural school. To leave the district school for the town school is counted SUCCESS, to remain a district school teacher is—not.

Financial Aid.

Now to what is this state of affairs due? It is often said that better teachers, better equipment, and better supervision, alone are necessary to produce better schools, that these are to be had by paying better salaries, and that therefore the crying need of our rural schools is more money. Upon this ground many plans for state aid are advocated, some of which have already been put into operation. Among these latter are: The bonus given in this state to all schools employing a first-grade teacher for at least eight months in the year

and maintaining a certain standard of material equipment; aid to the library fund of the school; loans to the district of state school funds at nominal rates of interest, etc. It is even proposed in one state to compel by law the employment of first-grade teachers, and the maintenance of fair equipment in every district, and to pay the extra expense over and above a fixed and reasonable per cent. on the district property, from the state funds. But while these devices are doubtless an aid to the rural school they do not solve the entire question. The problems of the rural school are not merely financial ones. Within the writer's own experience has come more than one rural school where the material equipment was fully equal to that of many a village school, where funds were abundant and a liberal spirit in their disbursement was not lacking, where a good salary was gladly paid when a good teacher could be secured, yet with all this these schools still labored to a great degree under the same disadvantages of poor attendance, low grade of scholarship, low rank in popular estimation and inability to retain the services of a good teacher.

Authority and Responsibility.

Among the positive conditions which are responsible for many of the deficiencies of the rural district school may be put the relative freedom and independence, the practically unlimited authority and responsibility of the country teacher. In the city school each individual is part of an organized systematic whole. The work is planned, divided, and apportioned by higher authorities. Often this division and specialization of work is carried to an extreme. The grade teacher has little or nothing to do with the making of the course of study, the organization of the school, the rules for its management. If the class instruction presents difficulties in matter or method the specialist can be consulted or the teachers' meetings attended. If the problem of dealing with some one pupil becomes perplexing, there are the rules of the school board regarding discipline and there is the principal to consult as to the best course of action within those rules, to uphold her in it, and to take upon himself

the final responsibility. At every turn the teacher is made to feel that if her field is a somewhat limited one, if her freedom of action is restricted and her authority reduced, her responsibility is lessened in proportion, and that in her restricted field of action she is supported, held up, as it were, by the very machinery of organization that hampers her. Like the worker in the factory she learns to perform with surprising celerity and perfection one part of a complex process, but need have little knowledge of and no care for anything beyond.

The rural teacher has no such help and no such limitations. She is her own superintendent, principal, and corps of special instructors. She is free within very wide general limits to select her own course of study, to organize her own grades and classes, to fix her own standards of promotion, to set up her own ideals of government, and to decide upon the best means for attaining to those ideals. Not only is she free to do all this, but she is responsible for its being well done. Whatever advice or assistance she may be able to obtain in the matter does not alter the fact that in the public estimation at least, she remains wholly and solely responsible not merely for the class instruction in every subject and grade, but every detail of the organization, management, and government in their entire range. Despite the existence of county superintendents and school boards, the fact remains that the responsibility and therefore the authority of the teacher is practically unlimited in all matters connected with the school save only that of its financial support, and to this she is often expected to contribute by seeing that as many pupils as possible attend long enough to be entitled to the public apportionment. This fact is too seldom fully recognized in all its bearing.

The country schoolmasters of "ye olden time" whose portraits have come down to us in literature and tradition were wont to realize this limitless authority without acknowledging an accompanying responsibility. The teacher of the present day, the young girl fresh from the high school or the normal, is apt to feel more or less



For the Blackboard.

deeply the responsibility of her position with no adequate conception of the authority it implies.

(Social Standing of the Teacher)

A second great difference between town and country schools lies in the social standing of the teacher and the social importance of the school. In the city the teacher is a private individual with her own private social circle of friends and acquaintances selected in accordance with her own tastes or family connections. What she may say or do outside of the school-room is her own concern and gives rise to no comment beyond that of her own circle. In the country on the other hand, with its limited social life, the teacher, by virtue of her office, holds a semi-public position, and every word and act, out of school no less than in school, is subjected to the light of publicity. The proverbial gossip of country places is often annoying, but it is a natural result of the conditions of rural life, and is not in itself an essentially bad thing. The teacher cannot escape, she *must* meet it, and the manner in which she does this determines whether for her it shall be a good thing or a bad one. She may set the neighborhood to discussing things which make for their own social, intellectual, and moral improvement, if not so easily yet quite as surely as she can allow them to descend to empty discussion of her dress and manner or criticism of her behavior, and this power of the teacher is re-inforced by the importance of the school as a factor in the social life of the community.

In the city, the school is regarded almost from a business standpoint. It is a place where so much knowledge, so much thinking power is to be gained at the cost of so many hours of attendance. Little or no social interest is connected with it. The social needs of the people are met in full by other means, the theater, the lecture, the concert, the various church meetings, clubs, societies, parties and friendly calls. Even the children are often allowed more of social recreation than they can afford either the time or the strength for, and it is the interest of the city school to restrict rather than to encourage this.

But in the country it is quite different. Many of these aids to social life are quite lacking, all are greatly reduced and the school in the absence of other institutions becomes an important social center not only for the children but thru them for the whole community. And in turn the social element becomes an important part of school life.

Again we find this fact to be seldom clearly recognized. The young teacher fresh from her home school has left behind her her circle of friends and companions, to whom she expects to return soon, and she has little or no desire to assume other and essentially different social relations with people with whom she has little in common and on a footing which she either does not understand at all, or but dimly at best. Her home, her friends, her social sympathies are all elsewhere; she is employed to teach the school, and doing that to the best of her ability she seems to herself to have done her whole duty. The social opportunities for good which the school presents and her responsibility for the best use of those opportunities is too often completely overlooked.

The Attendance Problem.

Among the many widely varying material conditions, which distinguish the rural from the urban school, perhaps the most fundamental is the distance of the pupils from the school and the modes of conveyance. Seldom is the city pupil more than ten or fifteen minutes' walk from his school-house, and if by chance he is farther away or too delicate to walk, the street car furnishes a cheap and comfortable means of conveyance as it does for all in stormy weather. No physical hardship need be incurred by any pupil in reaching the school. The country pupil on the contrary often lives at a distance of one or two miles from the school-house, or even more. Neither

has he the well-paved walks of the city child, but in all sorts of weather he must plod the rough, or muddy, or dusty roads, exposed to extremes of heat and cold, to sun, and wind, and rain, and snow. The more delicate children are unable to do this, the less ambitious seek to avoid it whenever it becomes irksome, and this condition, reinforced by other causes which operate everywhere, lack of interest, needs of the home, etc., tends to make the enrollment small, and worse still, the attendance intermittent and the work desultory.

Neither is this a condition in which we may look for any radical change. Like those previously mentioned it is a part or consequence of the larger conditions of rural life, and will be modified only as those larger conditions are modified. It is a condition which the teacher must recognize, do as much as possible to allow, and provide for.

(To be continued.)



Schools Gardens at Home and Abroad.

A bill is now in preparation for the Minnesota state legislature which will, if it passes, authorize State Superintendent Lewis to put into execution his long cherished plan of including instruction in practical agriculture in the rural school curriculum. The course, as laid out by the state superintendent, has been submitted for criticism to President Tucker, of the state agricultural school, and will be subjected to still further discussion at the annual meeting of the county superintendent in December.

This bit of news from Minnesota is significant, for it signalizes the first attempt on a large scale in the United States to solve the rural school problem by the introduction of practical nature study. There have been a few sporadic efforts. One that is going on in Colorado was described recently in the *New York Evening Post*, and it is said that school gardens are being tried, in an amateur way, in some counties of New York state and in New England. Nothing like the attention, however, seems to have been given to the subject in this country that has been bestowed upon it abroad. Some account of what is done in other countries may therefore be timely and readable.

European School Gardens.

It is said that the idea of the school garden is of Swedish origin and that there are over 2,000 schools in Scandinavia which have them. In Germany, the idea has taken well and, altho there is no national system of school gardens, there are many scattered examples. The work would seem still to be in the experimental stage. The first German garden school was started in 1881 by the local authorities of Gerderath, Prussia. Similar schools have been established at Gerderhahn, Bugelu, and Ratheim and at several other Saxon towns.

One of the most interesting is that at Alfter which has been described by Mr. C. B. Smith, in a bulletin published by the United States department of agriculture, and entitled, "A German Common School with a Garden." The work at Alfter is intensely practical, differing from many of the German schools in which instruction in agriculture consists in lectures upon theories of drainage, composts, and the like, with never a bit of practical laboratory work under the open sky. This bulletin of Mr. Smith's is very good reading and ought to be in the hands of every student of education.

Other countries of Europe have the school garden. It is popular in France. Nowhere is it better established than in little Belgium, itself one of the garden spots of the world. There every rural school has not less than an acre of garden space for carrying on a full course in theoretical and practical agriculture. The natural science and manual training work, which is a strong part of the Belgium urban school system, is omitted in the rural school to leave room for this instruction in practical farming. An especially valuable element is the dairy

work which is taught the girls; most American schemes have had only the boys in mind.

All the children are graded and ranked for proficiency, in these studies as in and others. The course runs somewhat in this order: First, there is instruction in the growth of the principal trees, vegetables, and flowers with reference to watering, transplanting, and weeding. Then comes the use of various garden tools. After that elementary botany, followed by arboriculture and the study of domestic animals. Finally, the theory of soils is taken up at first hand.

The Rural Schools in England.

In the numerous articles upon the school garden which have lately been appearing in the public press, very few references are found to efforts at popular agricultural education in England. Yet a great deal is going on there, not in a systematic, orderly fashion, for that is not the way English education runs, but with numerous fascinating individualistic experiments. These are not the less valuable to American students of the subject because they are sporadic and provincial.

As an example of the sort of thing that is possible in England, take the county of Surrey. There according to a writer in the *London Times*, continuation school garden work was initiated by the county council at Banstead in April, 1892, and the results have been carefully tabulated. Only strong boys, more than twelve years of age are eligible for this teaching, so that it is of different character from that which prevails in Belgium. These boys have in seven years cultivated 2,222 gardens of about a square rod in extent. Their instructors are practical gardeners who are of course very numerous in a county that is adjacent to London. Upon the plots are grown every kind of useful vegetable and some flowers. Upwards of 40,000 crops have been grown and brought to maturity in these plots. Every one of these crops has been subjected to critical examination and valuation, so that the progress made can be determined with exactitude. Some very satisfactory results have been obtained. A few examples may be cited:

At Banstead, in 1894, the value of the crops amounted to \$1.06 per square rod; but as the cost for rent, seeds, manures, and other small items amounted to \$1.25 per rod there was a net loss of nineteen cents per rod. This is equivalent to nearly \$30 an acre, and represents farming that is not very profitable. So much for the beginning. In 1899 the value of the produce in each plot amounted to \$2.71; cost of material: \$1.25; net gain \$1.46 per square rod or something like \$300 an acre. It must be granted that this was a remarkable improvement.

At various other places in England, agricultural education is going on. Another letter to the *Times* gives some particulars relative to teaching at Boscombe near Bournemouth, a work that was started some six years ago by Mr. T. G. Rooper, inspector of schools for Southampton. The consent of the school managers was obtained, a piece of land secured at some local nurseries, and a professional gardener was engaged to teach the boys. Only the older boys of the school are included. Each boy has a plot of land thirty feet by ten feet and there are besides several other plots on which all the boys worked together under supervision of the teacher. Practical instruction is given in the growing of fruit, flowers, and vegetables, the pruning of fruit-trees, the values of different kinds of artificial manures as applied to different soils, etc. The boys are encouraged to take notes and ask questions during the lessons. They are also permitted to sell the produce of their plots, handing over the money to their teacher, who returns them half of it at the end of the year. For the first two or three years the boys competed as amateurs at several of the local horticultural shows, but the committees of the shows withdrew such permission on the ground that, as they were taught by a professional gardener, they rank as professionals. Several of

the boys have plots in the gardens at their homes and these they cultivate in a similar manner to the gardens at school.

This home gardening is encouraged by the school managers who pay for the manure and seeds used. The lads take a great interest in the work and the headmaster of the school finds that in spite of their absence from school on three afternoons a week, their education in the regular subjects is not neglected. The parents of the boys approve the innovation, for they recognize that it not only improves their sons physically and mentally, but it gives them an interesting hobby which is the means of preventing them from spending their leisure time in loafing about the village streets.

Both these examples are from the south of England where the standard of intelligence among the farmers is highest. In some of the more remote counties, a good deal of prejudice has been encountered. This is especially true of Cheshire, where the regular teachers of the rural schools have been asked to give courses in the principles of agriculture. The very name "Agriculture" had to be dropped at the start and the term "nature knowledge" applied in its stead, so great was this prejudice of the farmers against schoolmasters who try to teach agriculture to their sons. What, say they, can a schoolmaster know about agriculture that is worth teaching? Under the name of nature knowledge, the pupils are taught something regarding the principles of drainage, the value of moisture in the soil, the action of lime in the growth of trees and plants. They have, however, no school gardens as yet. The work of educating the parents has to go alongside that of educating the children; and it is a far more difficult task. Its magnitude may be illustrated by the following incident: "A lecture in agriculture was recently given at a county council meeting. At the conclusion of the lecture a farmer got up to move a vote of thanks to the speaker of the evening, which he did in this way: 'We farmers of——knows what we know and what we don't know we don't want nobody to tell us.'"

The Educational Aim of the School Garden.

The educational value of this work in England seems to be fully recognized. An "Agricultural Education Committee" has lately been formed which is performing considerable service in shaping not only popular but official opinion. The pedagogical side of the instruction is very well explained by a writer in the *School Guardian* who says that its aim is "not to keep the young generation in the country, for whether a boy stays in the land or not depends on economic conditions that will be little affected by education. Partly it is to ensure those boys who do not embrace a rural life get a little training which will be directly helpful to them; but primarily it is to introduce a better intellectual method, bringing school and books into connection with things; to teach them that work may be done with brains and that life may be carried on with thought."

In this quotation is summed up the need of instruction in agriculture in American country schools. One hears on every hand talk to the effect that it will check the tendency of population to flow to the cities. It may have a slight effect in that way, but so long as improvements in agricultural machinery make it possible for an increasingly small proportion of the population to do the work of feeding the whole community so long will the drift to the cities continue. The excuse for the introduction of the school garden into the United States lies in the right of country children to get the benefits of the educational advantages of their environment. Manual training in the sense of shopwork they cannot have, but an equally valuable form of manual training stands ready to be utilized. Even the teachers are not wanting, for our agricultural colleges are turning out their thousands of graduates, many of whom could profitably combine teaching and farming.

The Magazine at School.

By SUPT. A. B. COLE, Plainville, Mass.

Every well equipped school-room needs a large variety of reference books which can be quickly used as occasion requires. To purchase books of travel is usually considered outside the scope of authority vested in the school-committee, unless there is a special appropriation or some fund for the purchase of general reference books. To purchase books of history is expensive and if the best are bought they are so comprehensive that but few students would have either the time or ability to gain much from them.

Then, too, the passing events cannot be obtained in book form as they are needed. Portraits of prominent men cannot be gotten from books alone. In lieu of such things the magazine can do much to fill the desired want,—can do more than the average cheap reference book would do.

How to Obtain the Magazines.

In every town, village, and city there are many people who buy an occasional magazine, but who are not regular subscribers. Once having looked it thru they have no further interest in it, and unless some better fate overtake it, it is quite likely to lend assistance in starting a fire in the kitchen range some cool morning. There are other people who buy some magazines every month, but no particular one. These persons are more apt to save theirs than the first class because the choice of each month is usually determined by some article of special interest. As they are read the books are laid away "for reference." Probably they are never looked at again and after a year or two of being moved from cellar to garret they find a comfortable lodgment in the musical rattle trap of some rag-picker.

Again there are "magazine clubs" often composed of several families, each of whom takes one or more magazines, and these are passed around so that each individual has access to a dozen or more different copies every month.

Now, all these meet various fates; a few, no doubt, find their way to some charitable institution, or are given to poor people in the neighborhood; some may be preserved for the library of the readers; the majority are in all probability destroyed long before they have passed their usefulness,—in fact a standard magazine never passes its usefulness except by destruction.

Nine-tenths of the people who obtain these magazines monthly or only occasionally, would much prefer to give them away if some one would come after them, or if they knew where to send them. A notice to all the

parents issued by the teacher stating that such magazines are valuable and would be appreciated will set the ball a-rolling. A little interest created among the pupils will insure the fact that the parent will not have an opportunity to forget the suggestion; this interest on the part of the pupils if well fostered will be very likely to increase until its effect is felt outside his immediate home circle into the homes of cousins, uncles, aunts, and friends. In this way the whole school territory will be pretty thoroly canvassed.

Not only may the teacher do this, but, as his general interest in the school is an interest in the community, he may send invitations to lodges, to clubs, to sewing circles and quilting bees asking the individual members to hand to some pupil such magazines as they may have no further use for. He may also put up notices in the post-office and at such places as "men do congregate" that magazines and books are desired and if left at certain places will be collected.

The acknowledgment of these as they are received will be items of interest in the local newspaper.

Another very easy method by which the magazines may be obtained from month to month and kept up to date is the following :

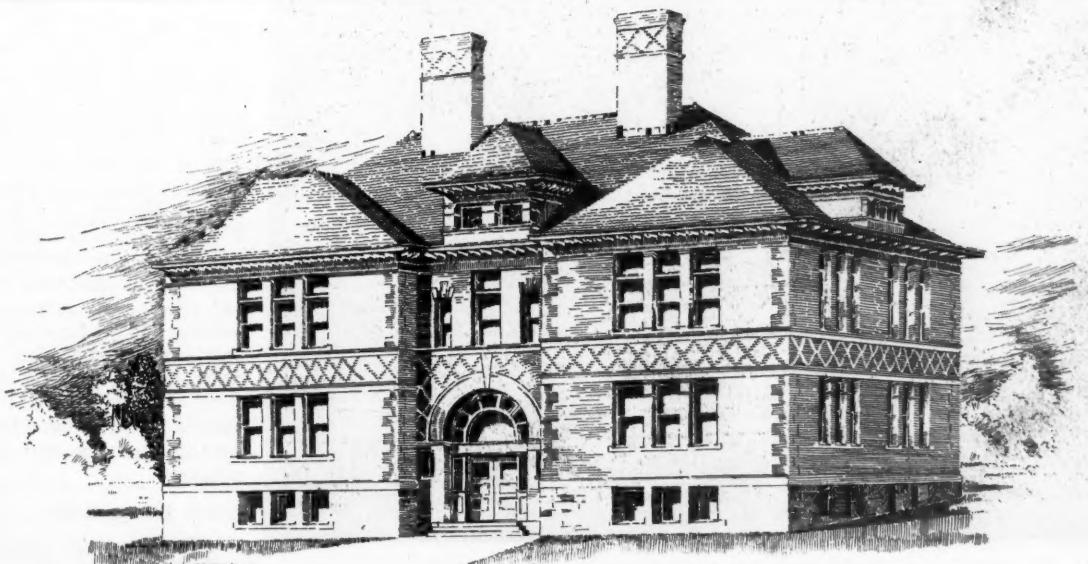
After talking the matter over and working up a sufficient interest, first having obtained the verbal or silent approval of the school authorities and parents, organize the school into a magazine club and assess each pupil two cents a week payable monthly in advance.

If this seems too much commence with one cent a week and after the children have become interested increase to two cents.

If there are forty pupils in the room this plan will net over three dollars a month which will secure more than a dozen standard magazines and papers, including such as the *Century*, *Harper's Review of Reviews*, *Scrubner's*, *Cosmopolitan*, *McClure's*, *Ladies' Home Journal*, *Youth's Companion*, *Young America*, *St. Nicholas*, *Public Opinion*. A daily newspaper might be added, if desired. Such a plan also brings in a great many sample copies which contain valuable matter and at the same time enable the pupils to broaden their knowledge of current periodicals.

In the large grammar schools of cities and towns where there are several rooms of the same grade in the one building this plan may be conducted as a "building club," or each room may purchase and use its own material independently. The latter plan is the better one.

(To be continued with suggestions on the use of magazines in the school-room, on the classification of articles, disposition of all magazines, etc.)



Fourth Ward School Building, Connellsville, Pa. J. C. Fulton, architect.

Some Principles of Ventilation.

No argument is needed nowadays to show the necessity of good ventilation in school-houses. Most superintendents and school committee-men will admit it readily. Yet there exists, even among those who should be well-informed, a great deal of ignorance of the basic principles of ventilation.

These fundamental laws of the diffusion of pure air have lately been stated in an admirable manner by Mr. R. C. Carpenter, writing for the *Brickbuilder*. A condensation of his article will undoubtedly be of interest to readers of THE SCHOOL JOURNAL.

The amount of air required for each pupil in a school-room is the first thing which has to be settled. The requirement of thirty-three cubic feet of air per minute is a reasonable one for most conditions, and is as high as can be urged at the present time. In 1836 the rule was that four cubic feet per minute for a well person or six cubic feet for the sick in hospitals was a safe allowance. A few years ago it was customary to allow for children only half the air required for adults, but experience has shown that children need just as much fresh air as their elders. The allowance of thirty-three feet per minute seems almost excessive when it is realized that the total amount of air actually required or used for breathing by each person rarely exceeds from one-fourth to one-half a cubic foot per minute. Yet it has to be remembered that no pure air can be introduced into a room which will not mix with air already vitiated. The problem is so to dilute existing air in the room that no harm to the people who breathe it shall result. Vitiating air is full of injurious bacteria which remain, perhaps, after fresh air is admitted, but which lose much of their power for evil thru the bracing effect of fresh air upon the human system.

Avoiding Draughts.

Practical ventilation is rendered difficult by the necessity of distributing the incoming air uniformly throughout the room. It is easy enough to throw open windows and allow a vast body of fresh air to flood in; yet that is not practical ventilation and may do much more harm than good. A further condition of all ventilation is that it shall conduce to evenness of temperature, and, in this country at least, to a temperature that shall not be absurdly high. The overheated room is a peculiarly American vice.

The Right Height for School-Rooms.

The form or shape of the room is important in securing ventilation. The difficulties in the way of getting a uniform diffusion of air increase with the height of the

room. It was formerly supposed that a lofty room, because it contains a great deal of air, provides better ventilation than a low room. This is a mistake. There is no advantage in the presence of a large storage capacity far above people's heads. From twelve to fifteen feet is a good height for a school-room.

Ways of Distributing Air.

The circulation of air can be accomplished by three distinct means: first, by heat applied directly to a flue for the purpose of warming the air in it, or by heat indirectly; second, thru mechanical means, as for instance, by blower, fan, etc.; by induced methods as jets of steam.

The third way need not be considered in the ventilation of schools.

When air for ventilation is moved by the hot-air furnace system, it is warmed directly by coming into contact with the heater, and the motion or circulation produced is caused by the difference in weight of the colder air on the outside of the building and the warmer air in the flues leading to the rooms. The higher the temperature of the flues the greater the delivery of air.

People often suppose that this is the most economical method of moving air. It is not. It is costly and inefficient. If the outside air is colder than that in the flue, well and good; there is an upward draught in the flue. But if the reverse conditions chance to prevail, the downward draught in the flue causes all the currents of air to move in just the wrong direction. Then, too, when heat is not required, a special fire has to be kept up in the flues for ventilation, or else the doors and windows must be thrown wide open. This last, besides being from the physician's standpoint, objectionable, requires the constant attention of the teacher; and a prime necessity of ventilation is that the teacher should not be troubled with it at all. The whole presumption is against this so-called "natural" system of ventilation.

The employment of mechanical contrivances has come to stay in school-house construction. The commonest system is that in which air is moved by a centrifugal fan or blower. Two forms of fans are used. One of these receives the air at one side and delivers at the opposite side, the principal motion of the air being parallel to the axis. This is known as the *disk fan*. The other fan delivers air radially and from the ends of its vanes. It is usually designated as the *centrifugal blower* or simply the *blower*.

The disk fan is valuable for moving a large volume of air at low velocity. The blower is better adapted to move air when a considerable difference of pressure is required. It is used in school-house ventilation where the

air must necessarily be transported some distance. Either fan will be found to be more economical than the natural method. A pound of coal used to generate power for a fan will move several times the volume of air that could be moved if the coal had been burned directly in a flue. The mechanical systems of ventilation also have the advantage in that they are not affected by stress of weather and the force available is always sufficient to overcome the counter effects of wind or a difference of temperature. It is for this reason positive and reliable.

Change of Air.

A good way to express the amount of air needed



in a given school-room is in terms of the number of times the air will need to be changed per hour. Suppose that a room has seats for sixty pupils. Each pupil requires 2,000 cubic feet of air per hour. Consequently we must supply 120,000,000 cubic feet. Now, if the cubic contents of this room are 20,000 cubic feet we should then need to change the air in the room six times per hour. As a rule the air in school buildings should be changed from six to twelve times per hour.

The Limit of Velocity.

It is easy to start a current flowing out of a room. It must not, however, go too fast. There is always the danger of starting a draught. The limit of velocity should be put at five or six feet per second for the entering air and seven or eight feet for the discharge air. In practical construction the register used either for the incoming or for the outgoing air should be made large enough to permit the requisite flow at the desired velocity.

Introduction of Air.

Where the air should be let in and where let out has been the subject of endless controversy among experts. Some engineers insist that all the fresh air should be introduced at the bottom of the room and taken out at the top. Others maintain that the only way is to bring in the fresh air from above and let it circulate downward, drawing it out from the floor or nearby. The truth seems to be that the question of the best point of entrance and outlet should be determined by the proportions of the room to be ventilated. A method which will give good results in one room may fail in another. Each school-room ought to be studied as a separate problem. If any rule is to be laid down it is that less force is required for an upward system of ventilation than for a downward system, tho this very fact makes the problem of an equitable diffusion of air and heat more difficult with the upward than with the downward system. It has been proved practically that with the ordinary school-room good results in ventilation can be gotten by bringing in the air at a point two-thirds of the distance from floor to ceiling, close to one corner and with the register for the discharge of air located on the same side of the room but near the floor and near the lower diagonal corner. It is a good plan to keep both heat and vent flues near an inner wall and, when possible, to introduce the supply of fresh air over a door; as the motion of air is influenced greatly by questions of temperature it is advantageous that the flues for the discharge of vitiated air should be kept as warm as possible when an upward current is desired. If a downward current is wanted the flue should be kept as cool as possible.

These principles, dogmatically stated, are only a few of the many which must govern the work of an architectural expert; they are, however, the principles which the layman educator ought to be familiar with in directing or judging the efforts of the specialist.



Expert in manual training, eight years in charge work in important cities, wishes similar position. Competent to organize work from start. Superintendents and boards of education especially requested to write me. Have two diplomas. A. B., care THE SCHOOL JOURNAL.



"Joyfulness in Education" is the subject of an editorial in THE PRIMARY SCHOOL for December, an editorial that is full of practical inspiration for teachers. Other helpful articles are "Christmas in the Primary," by Margaret Lorraine, and "Keeping Christmas," by Bertha E. Bush. This number is beautifully illustrated.

School Equipment.

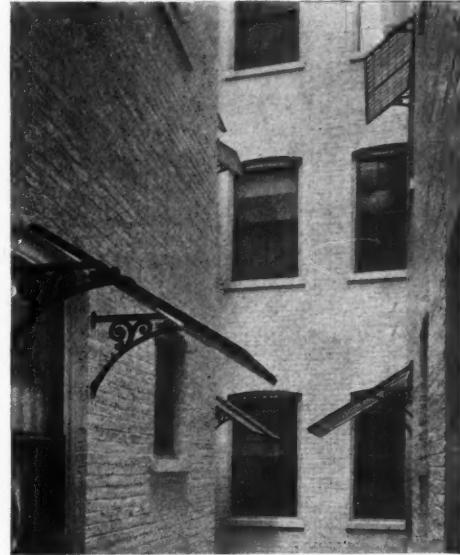
Under this head are given practical suggestions concerning aids to teaching and arrangement of school libraries, and descriptions of new material for schools and colleges. It is to be understood that all notes of school supplies are inserted for purposes of information only, and no paid advertisements are admitted. School boards, superintendents, and teachers will find many valuable notes from the educational supply market, which will help them to keep up with the advances made in this important field. Correspondence is invited. Address letters to *Editor of THE SCHOOL JOURNAL*, 61 East 9th street, New York city.

Light Diffusing Media.

No subject is exciting keener interest among architects just at present than the use of the various forms of prismatic, ribbed, and maze glass in securing a more effective use of natural and artificial light. The importance of this matter in schools can hardly be overestimated. One of the first conditions for effective and healthful work is plenty of light. In most schools the students near the windows suffer from too strong light while those at a distance sit in comparative darkness. Very much of the nearsightedness as well as the extreme nervousness of our school children grows out of habits of reading or study in badly lighted rooms at home or at school.

The Atkinson-Norton Experiments.

An account of important experiments in regard to the diffusion of light performed by Mr. C. L. Norton at the Massa-



An Exterior Installation.

chusetts Institute of Technology was printed in THE SCHOOL Journal for Nov. 3.

Commercial Applications of Prismatic Glass.

Of the four forms of glass tested in the Atkinson-Norton experiments the prism glass seems to be the most satisfactory. Whether the so-called "factory-ribbed" glass which showed up so well in the tests will immediately be commercially available remains to be seen.

About the prism glass this much is certain: It can be used to transform any room with dark corners into an evenly lighted cubiculum. The fact that its tendency is to throw the light very strongly into the rear of the room makes it a very facile medium in the hands of the skilful architect or engineer. It is by no means necessary or desirable to cover the whole of a window space with the prismatic glass. To do that would simply transfer the intensity of light to the opposite wall. Ordinarily, if the lower sash is glazed with plane glass and the upper sash with prism glass adjusted by a specialist, a perfectly lighted room will be obtained. According to the character of the prism glass used the light can be thrown in any direction illuminating the darkest recess. The deepest rooms can be treated effectively in this way. All that is needful is that the light shall be able to travel in straight lines.

Luxfer Prisms.

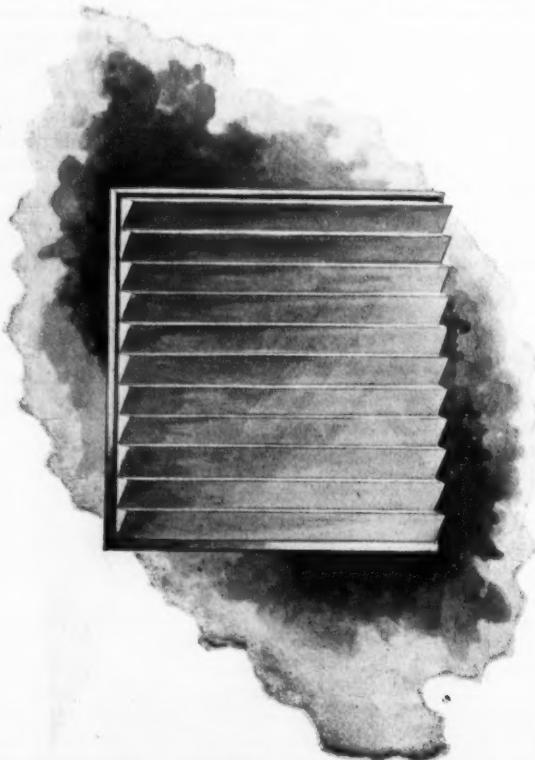
The products of the American Luxfer Prism Company, of Chicago and New York, have for several years been available for purposes of school lighting. They have already been installed in a great many educational institutions. An installation which Mr. A. P. O'Brien, manager of the New York office, happened to be figuring on when a SCHOOL JOURNAL representative visited him was in the Albany, N. Y., high school. Other

schools in the neighborhood of New York which already have the Luxfer prisms are as follows:

St. Mary's school, 8 East Forty-Sixth street; Trinity church school, 70 Church street; Public school, No. 42, Allen street, near Hester street; school, 168 West 79th street; Morristown high school, Morristown, N. J.; The Ethical Culture school, 119 West 54th street.

What Luxfer Prisms Are.

Luxfer prisms are sections of crystal glass, of a standard dimension of four inches square, having a smooth outer surface and an inner surface divided into a series of small accurately formed prisms. This size has been found by experience to be



most convenient, both for the manufacturers and for the builders or architects. It is also artistically best suited for the type of window that prevails in the modern buildings of to-day.

There are a great many varieties of prism used, so that the Luxfer company finds it advisable for one of their own engineers to study the problem of each installation where that is possible. Each case requires some special treatment, being dependent not only upon the size and shape of rooms and windows, but upon the surroundings of the building and the direction from which light comes to the window. One of the strongest points made by this company is that they study each problem of lighting in a scientific fashion much as an expert oculist studies the problems of getting light to the retina of the eye in the best possible fashion. The commonest Luxfer arrangement provides for a lower sash, glazed with plane glass and an upper sash of prism glass, the size and quality of this varying greatly according to the nature of the interior to be lighted.

Most of the big department stores are now saving on their electric light bills by introducing this form of glass. The New York, Philadelphia, Boston, and Chicago stores are already well equipped with it.

One other point that is made by the Luxfer people is worth noting. Their glass does not merely perform the function of a light transmitter; it also becomes part of the architectural decoration of the building. It is a known fact among architects that ordinary window glass does not enter properly into artistic harmony with the other elements, but is rather a necessary evil. Hence the extensive use of stained glass in buildings where an esthetic effect is sought. The Luxfer prisms when properly applied, even to the most expensive and ornate buildings, are found to be a highly ornamental feature in the entire facade. When looked at from the outside, they do not have the appearance of glass at all. This is, of course, a consideration in the erection of modern school-houses in which use and beauty go side by side.

The Diffusion of Artificial Light.

Hardly less important to the schools than the correct distri-

bution of daylight is the question of the diffusion of artificial light. Wherever there are night classes, in libraries and reading rooms, in physical laboratories and studios, the problem of getting a light that is physiologically harmless and usable educationally must be faced. It is well known that students in evening classes are especially liable to afflictions of the eyes. Library work, too, even under the best conditions is very trying in the evening. Anyone who has sat face to face with an incandescent light in a college library for four hours is likely to know how essential it is that the new discoveries in the way of diffusion of light shall be applied to interior illumination.

As a general statement it may be said that progress in the last few years has been in the direction of producing light sources of great intensity. The arc and incandescent electric lights were a step in this direction. When Auer von Welsbach made his remarkable discovery of a means for utilizing the hitherto unconsumed elements in gaslight, thereby increasing its efficiency seven or eight times, he added another powerful illuminator to the list. Very lately acetylene gas has been found to be capable of producing an intense white light that almost vies with daylight in brilliancy. All these new forms of illumination are powerful and, unmodified, full of physiological danger.

The element of danger consists in this: by the contraction or dilation of the opening into the eye—the iris—the amount of light entering is automatically regulated. The well-known effect on going from a dark room into brilliant sunlight is an example. Tho the objects are brilliantly illuminated, they are not plainly visible until the pupil has had time to adjust itself to the stronger light. This effect is commonly called dazzling and is due to an excess of light entering the eye and falling upon the retina. Eyes frequently subjected to this effect are likely to be permanently injured. When the light entering the eye, even after the pupil has contracted, is in excess of the amount required for distinct vision, the effect is called glare. This effect is also injurious to the eyes.

What Good Illumination Requires.

Primarily there should be a sufficient amount of light thrown upon the objects to render them easily visible; and in looking at the objects the eye should not be dazzled by intense rays direct from the source itself.

It may fairly be said that the whole subject of the distribution of lights in public places is destined to be overhauled in the near future as the various forms of glass described in THE SCHOOL JOURNAL of Nov. 3 come into use as globes. By referring to the action of the prism glass as shown on page 422 of that number, it will be seen that the ideal position for a globe of prismatic glass when it is desired to light the lower part of the room most effectively is on or near the ceiling. Placed there it is comparatively inconspicuous and does its best work.

The Holophanes.

The first attempt on a large scale to make a commercial application of the principles of diffused light to artificial illumination is now being made by the Holophane Company, of New York. This firm has adopted the form of prismatic glass that was worked out by Blondel and Psarondaki, two Parisian scientists, in strict accordance with optical laws. What they claim for the Holophane glass is that it embodies the following requisites in lighting:

1. Diffusion of light (softening or removal of glare), equaled only by "opal" glass and giving double the amount of illumination.

2. Downward deflection of upward rays, combining reflection with diffusion.

3. Downward deflection of rays near the horizontal that cannot be reached by any other system of reflectors.

4. Distributing the rays of any particular source of light in the spaces where they are most needed, thus greatly increasing the effectual illumination.

5. Covering the light source so that neither the



form, number of lights, nor the fixtures are visible, the glass itself becoming the practical source of light.

6. Rich appearance.

7. A method of manufacture which insures the scientific accuracy of an optical instrument in a cheap form of glass.

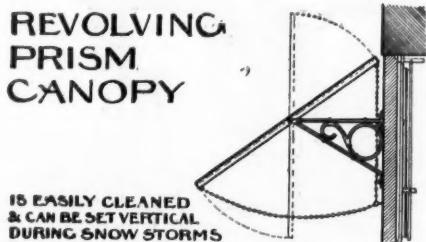
The Holophane globes are made of transparent glass, so that none of the light rays are intercepted. The inner surface of the glass is given over to carefully calculated flutings or prisms used solely for diffusing or softening the light without loss of power. On the outside face are prisms calculated for deflecting these diffused rays into directions where needed.

In practice, Holophane glass, when placed over a light, will render a dazzling light soft and healthful, while increasing its effective illuminating power.

"The "Luminous Prisms."

Another firm which has begun to do some work in the way of school installations is the New York Prism Company, of 473 West Broadway, New York. Their business thus far has been principally with private schools, tho they have had some orders from the boards of education of Philadelphia, Cleveland, and Chicago. In New York city they have supplied prismatic glass to the following institutions: The Normal college; the

**REVOLVING
PRISM
CANOPY**



Brearley school; the Berkley school; the Cornell medical college; the Chapin Collegiate school.

This prism company has recently printed "Natural Light for School-Rooms," an essay addressed to the National Educational

Association, at Charleston. In this essay the facts about prismatic lighting are very succinctly and forcibly stated. It should be in the hands of every student of school hygiene in the country.

This firm employs a lucid engineer who makes scientific studies preparatory to each installation.

Maze Glass as a Light Diffuser.

In the Atkinson-Norton tests the ordinary maze glass which is very commonly used in airshafts, transoms, and other openings where a soft diffused light is desired made a remarkably strong showing. In especial the mazes made by the Mississippi Glass Company, of St. Louis and New York, came in for a very high place among the light diffusers. Two of the officials of the company, when interviewed by THE SCHOOL JOURNAL expressed themselves as not only gratified but very much surprised by the scientific prominence that had been given to their products, for they have never undertaken the manufacture of light diffusers upon scientific principles. Their varieties of maze glass are simply made for the satisfaction of the insurance companies who demand a glass that shall be valuable in the fireproofing of buildings. Maze glass, with wire ribbing suits this requirement ideally and is sold in great quantities. The illustration here shown is of the variety of maze glass which stood highest in the recent tests.

The Mississippi Glass Company has not yet seriously considered the problems of school lighting. They are glad, however, to have the effectiveness of their mazes known. It may be stated that the maze glass is peculiarly adapted to the lighting of rooms which are not very deep. A glazing of the upper sashes of all the windows of an ordinary school-room lighted from two sides with ordinary maze glass would result in a very soft, even light thruout the room. For studios, too, it is the ideal glazing. If an entire south window is glazed with maze glass, the light will be as uniform as in a studio with north exposure.

The Mississippi Glass Company people attribute much of their success in the technology experiments to the quality of their glass which is made from the sand of the Mississippi valley, generally conceded to be the finest in the world.



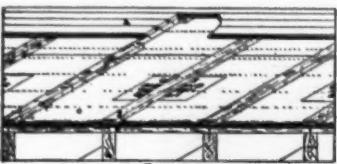
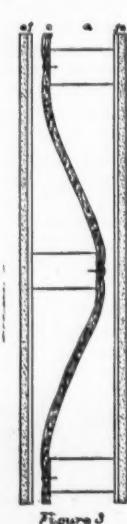
This illustration indicates, on the left-hand side, the diffusion of light thru a prism globe; on the right-hand side, the diffusion thru a globe of ordinary plate glass. The downward direction of the rays from the Holophane should be noted; the light is thrown exactly where it is most needed.

School-Room Acoustics.

The necessity of containing the sound of each class within its own room is something that ought to be considered in the erection of every school-house. The acoustics of sound conveyance has been carefully studied and applied for years, but the acoustics of sound confinement is only just beginning to receive the attention which belongs to it. The ordinary walls of lath and plaster are far from being sound deadeners at all. Rather they are good sound conductors.

Among the substances not subject to patent which have frequently been used for deadening walls and floors may be mentioned mineral wool. The objection commonly made to it is that the fiber of this is so delicate that it will not support any weight and therefore cannot intervene between the boards and timbers to interrupt the telephonic conduction of sound, but can only be used to fill up the spaces that are built for it. It has very little elasticity and in a short time settles three the jarring of the building and reduces to a powder. It is very cheap but requires special treatment. When so treated it is of considerable value.

One of the first patented preparations put on the market as a means for isolating sound is the Deafening Quilt manufac-



Methods of Filling in with Deafening Quilt:

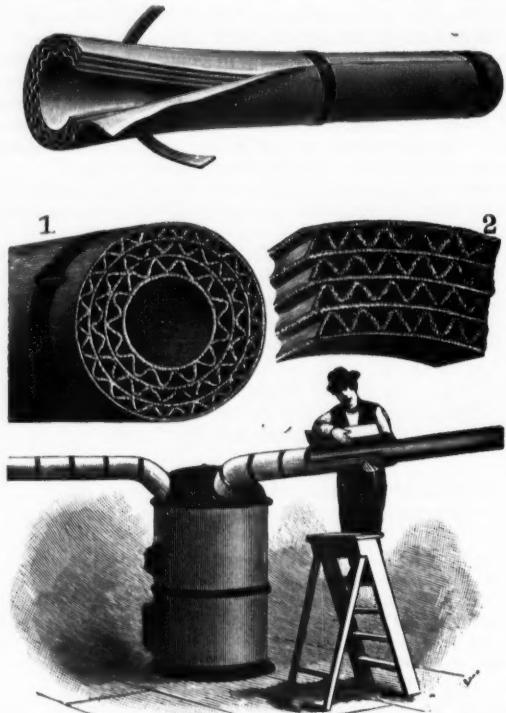
tured by Samuel Cabot, of Boston. This is composed of a peculiarly laminated matting of cured eel-grass, held in place between two layers of tough manila paper by quilting, whence its name "Quilt." Eel-grass was selected for the filling, after exhaustive tests of various materials, for four important reasons namely: (1) because the blades are long and flat, and when felted they form innumerable minute air spaces which break up and dissipate the sound waves; (2) because eel-grass being a sea-plant and containing silicon instead of carbon, is very uninflammable and therefore well adapted for use in fire-proof buildings; (3) because it is indestructible by decay, as is well known to every dweller by the seashore, and like all sea plants it contains iodine which repels insects or vermin; (4) because it is very tough and never loses the elasticity that is a necessary element in a non-conductor.

This quilting comes covered with heavy asbestos paper for buildings in which absolutely fire-proof construction is wanted. Among the schools in which it has been used may be mentioned the Castleton school, Staten Island, New York; the Strong school, New Haven; the Toner school, Washington; Randolph Hall, Harvard university.

A New Coveaing for Boilers and Pipes.

Here is something of importance in school heating. As everybody knows, where pipes are used to convey steam heat, considerable loss results from the radiation of the heat. This causes not only decreased efficiency of service, but increased cost of the fuel. The Ambler Asbestos Air-Cell Covering is designed to overcome and prevent this loss of heat. It combines the well-known non-conducting qualities of the air-cell structure with the fireproof characteristics of asbestos. The covering is composed of divided air-cells, each independent of the other, produced by arranging in alternate layers sheets of plain and corrugated asbestos paper wound into cylinders of proper interior diameter to fit all standard sizes of pipes. The cylinders are split longitudinally so that they can be easily slipped upon the pipes.

They are provided with an exterior canvas covering and with metal fastening bands. This device ought to prove very useful



in the heating of school-houses. It is made by the Ambler Asbestos Air-Cell Covering Company, Ambler, Pa.

The Dean Solar Sketches.

A neat little instrument that is of considerable value in the art class, especially for out-of-door use, is the Solar Sketchette here shown. It represents simply an ingenious application of an old law. It is a portable *camera obscura* that can be as



readily focussed as a photographic camera. When put into the hands of children with a taste for drawing it will teach a great deal about perspective and values. The illustration indicates how it works. It is made by the Haller-Kemper Company, Chicago.

An article with illustrations of the new systems of semi-slat writing will appear in "The School Journal" next week.

"Practical Hints on Class Singing," in the December TEACHER'S INSTITUTE is a timely little article for teachers who are preparing Christmas exercises. Other articles of practical value and pictures of great artistic interest make this a memorable number. The exquisitely supplement picture, mounted on dark grey paper, will be appreciated by all lovers of the beautiful.

Educational Trade field.

The Atlanta office of the Central School Supply House of Chicago has been put in charge of Mr. C. W. Clenton, a graduate of Emory college and well-known throughout the South as an enterprising and progressive young business man. Two of the firm's Southern representatives, Messrs. Miller G. Williams and H. H. Hirschfeld came north with Mr. Stiff to assist in the organization of the New York branch. This house is one that gets the good will of its employees to rather a remarkable extent.

Mr. F. A. Lorenz, president of the company, was in New York last week, looking over the field.

"Facts in Mathematical Geography" is the title of a hand-some booklet by Mr. Alexander Laing, inventor of Laing's Planetarium. It gives in a simple, easy fashion the principal truths about the rotations in the solar system. A valuable feature for teachers of geography is the chapter of questions and answers in the back part of the book. There are also practical suggestions as to the manner of conducting a talk and an exhibition of the planetarium before a class in the school-room.

The American Writing Machine Company of 302 Broadway, New York, has issued a most attractive circular, "The Book of the New Century." Aside from the excellences of the machine which it advertises this booklet deserves study as a specimen of good modern advertising. With its handsome color-print of Mt. Everest, its perfect typography and its agreeable electros, it must have been an expensive publication to get out, but the outlay undoubtedly justifies itself. The day of cheap, trashy advertising is about over. The reception of such a circular as the New Century's creates a presumption at once in favor of the firm that issues it.

The New York Silicate Book Slate Company has placed on the market a new telephone silicate slate. This has three pages indexed for telephone subscribers' names and a space for making memorandums or orders as received over the telephone. It ought to be a great convenience in educational institutions which are supplied, as all ought to be, with the telephone.

An Educational Game Company has been incorporated in Brooklyn to manufacture educational and other games. The incorporators are L. Mollenhauer, G. A. Price, and H. A. Price, all of Brooklyn.

The American publications of the New Thought Press as the *Book and News Dealer* has dubbed them,—that is to say, of magazines devoted to exploiting Christian Science, suggestion, applied psychology, etc.,—comprise a formidable list of eighty-one periodicals. They are almost as numerous as educational journals.

A new and interesting form of blackboard music work, similar to that which is used in English preparatory to book reading, has been put into a manual entitled "Graded Sight-Singing Exercises for Blackboard Use," by Francis E. Howard. These lessons have already been successfully employed by the author, who is supervisor of music at Bridgeport, Conn. The whole book is based upon what is known as the song method of sight-singing, in which musical knowledge is developed thru the practice and study of melodies, not scales, except as they appear in melody form. Published by Novello, Ewer & Company, New York and Chicago.

The Keystone Series of Popular Plays, gotten out by the Penn Publishing Company, Philadelphia, has grown to be one of the richest and fullest published in this country. These editions are especially adapted to amateur and school theatricals, for the stage settings and costuming are as a rule very simple.

Now it is New York that has been affected by the municipal publishing vagary. Not very seriously, however, it would appear. Recently Controller Byrd S. Coler set some inquiries on foot as to the cost of establishing a Greater New York printing office. Typographical Union No. 6 returned an estimate that the plant and building would cost about \$500,000. The journeymen printers favor the project, but do not believe that it will come to anything at present.

The Literary Collector is an entertaining monthly magazine devoted to the interests of collectors of books, autographs, and other historical matter. It is published by George D. Smith, 4 East 42nd street, New York.

The Prang Educational Company has just inaugurated a system of instruction by correspondence. Something of this sort

Mr. W. E. Cochrane, Eastern manager of the house, has long believed to be a necessity.

"There are," he said, "many schools which on account of their size, or for financial reasons, cannot think of employing a supervisor of drawing. As a rule they have to get on without much systematic art instruction."

"Now we want to reach these schools and expect to do so by our plan of supervision. We shall include the preparation of monthly outlines of work to be sent to the teacher of each grade; monthly typewritten criticism of the work done by pupils under each teacher; the distribution of specimens of work done by pupils in other schools; occasional criticism of drawing done by the teachers."

"We hope in this way to get at the superintendents and principals in small towns who desire to establish drawing in their schools under approximately the same favorable conditions which exist in city school systems employing local supervisors."

The Prang method is used in twenty-eight out of the thirty-five cities of the United States that have a population of over 100,000, and with two or three exceptions is in exclusive use.

Covering a somewhat different field from that occupied by the established correspondence schools of the country is the University Extension College Correspondence School of Detroit, Mich. This will be developed along the line of popular education in college subjects. It will of course grant no college or university degrees, but will make a point of preparing students to take examinations for degrees at institutions which accept study done *in absentia*. Such a school ought to be of great benefit to teachers who wish to do university work, who need guidance, and who cannot afford to take a year or two away from their wage-earning pursuits. The courses offered at present are in the line of languages, music, history, political economy, mathematics, physics, chemistry, and physical culture. The program is already rich; it will be still further enriched as the school grows.

The president of the institution is Mr. L. L. Lewis, a graduate of Queen's university, a distinguished scholar and English gentleman. He has gathered around him a fine corps of instructors.

"The School of English Branches" has been issued by the International Correspondence Schools of Scranton, Pa. It is descriptive of the work of the correspondence instruction in English spelling, grammar, composition, etc. The courses it describes are eminently practical and practicable.

In the death of Major J. Van Holt Nash, of Atlanta, the South loses one of its best known citizens and the American Book Company one of its most efficient managers.

Major Nash was a magnificent specimen of the Southern gentleman. He was born in Surrey county, Virginia, in 1833, and entered the book business, in Petersburg, where he was enjoying great success when the war broke out. He enlisted in the Confederate army and rapidly became one of the best trusted of the younger officers in Lee's army, finally occupying the position of major on the staff of Gen. Fitzhugh Lee. Since the war he has been one of the most prominent men in Confederate veteran circles.

Major Nash went to Atlanta in 1878 as representative of D. Appleton & Company. Later, in 1894, when the American Book Company was organized, he was chosen manager at Atlanta, holding his position until the time of his death. As a business man he possessed fine judgment and keen insight. His personal popularity and wide acquaintance in the whole South constituted a valuable asset for him and for the American Book Company whose Southern division has prospered in a remarkable degree under his management.

It is said that the sorrow exhibited by the old veterans of Atlanta, when the news spread of Major Nash's death, was something very rarely seen. The offices of the American Book Company, in the Anstall building, were thronged with Confederate soldiers, none of whom could speak of him without tears.

In bringing out their latest edition of Webster's *International Dictionary* with new plates throughout and with 25,000 additional words G. & C. Merriam Company is certainly entitled to look back with pride upon the record of the house. The firm was organized in 1831 by George and Charles Merriam. For a number of years they published law books, bibles, and other works until the death of Dr. Noah Webster in 1843 led to the purchase of his "American Dictionary of the English Language." Since then—during a period of nearly sixty years the house has devoted its energies and capital almost exclusively, and with marked success, to the making and publication of dictionaries. The first Webster's unabridged was produced by the Merriams in 1847 under the editorship of Prof. Chauncy

A. Goodrich. The next revision was that of 1864 under the supervision of Dr. Noah Porter, of Yale, assisted by several eminent scholars. In 1879 and 1884 various supplements were added to the work. In 1890 the famous "International" was completed after ten years of arduous labor by a large corps of scholars under the lead of Dr. Noah Porter. Now, at the close of the century the dictionary has been still further enriched by valuable additions.

The popularity of Webster's is shown by the fact that in England it is used by the editors or at the office of over a thousand journals, representing a large proportion of the newspaper press of the United Kingdom. This is certainly remarkable considering the prejudice which undoubtedly exists against American spellings.

Eaton & Company, of the Fine Arts building, Chicago, opened their New York office November 1. It is located at 3 East 14th street, and is in charge of Mr. C. R. Long, very well known to the Western trade thru his connection with the Macmillan Company. Mr. Long has been in New York all summer breaking the ground for the firm's entrance into the Eastern field. The Eaton publications are already on the lists in Greater New York, and are nicely started in the neighborhood. This firm was on the ground early with the new slant in writing. We bespeak for them a fair share of business.

Another Chicago publishing house which has come into the New York field is Scott, Foresman & Company. Their Eastern representative is Mr. J. A. Peck who has opened an office in the Presbyterian building, Fifth avenue. This firm has always had some business in New York, particularly in the Latin departments of high schools and private schools ; it looks forward to a great extension of its business.

One of the newest advertising publications of the firm is a booklet on "First Year Latin Work," by Mr. E. H. Scott. It is designed specially to illustrate the underlying ideas in *Bellum Helveticum*, as revised by Dr. Arthur Tappan Walker, but it contains a great deal of matter of a general interest to Latin teachers.

The board of education of Washington, D. C., has adopted unanimously Judson and Bender's "Graded Literature Readers" for use as basal readers in the public schools. An initial order of 22,600 copies was followed within a few weeks by another order for 5,000 additional copies.

The keenness of the competition in text-book lines is shown by the number of sample copies that collect in any superintendent's office. Mr. H. T. Dawson relates of one county, in Vermont, in which his firm, the University Publishing Company, recently effected an exchange of a complete outfit of one of their books for all the schools in the county in return for the sample copies which had been gathered there ; and the exchange was greatly to the advantage of the University people.

Queer letters sometimes come to publishing houses. Here is the wording of one that recently came to the University Publishing Company, the name and address, of course, being here given fictitiously :

"Please Sir :

Sent me Holmes Readers please sent it to B. B — St., Brooklyn, in the letter box 13, written on, he should knock it in."

One feature of the growth of commercial high schools, according to Mr. Coffin, of Williams & Rogers, is the tendency to drop all commercial studies out of the grammar schools. This is really a hardship to the families who cannot afford to send their children to the high school. Heretofore there has generally been a little bookkeeping or something of that sort in the upper grammar grades. Now it is all being done away. Undoubtedly the commercial high schools are good things, but is not their introduction attended with a danger of excessive specialization? Superintendents who have wanted more time for the enrichment of their school programs have seized this as an excuse for banishing everything commercial from the grammar schools.

Williams & Rogers report that their little manual, "Seventy Lessons in Spelling," passed its million mark in November. It was put together more as an experiment than anything else, from a conviction that an old-fashioned spelling-book would be hailed with delight in many quarters. Its success has been something phenomenal. A million copies is a record that no popular novel can emulate.

Master Edward Hering, sixteen years old, has come into considerable prominence thru the publication of his examples of bookkeeping work by the Sadler-Rowe Company. His exercises, which are simply specimens of work done with the Sadler-

Rowe books, have been carefully photo-engraved and will constitute a good model for other boys to follow.

The Phonographic Institute Company, of Cincinnati, has brought out two more interesting leaflets in their series of publications. One is a reprint of an article in the *Independent* by Amos R. Wells, entitled "The Long Gains of Shorthand;" the other is "Shorthand as an Educator," a paper read by G. Jerome B. Howard before the Eastern Commercial Teachers' Association, Boston, April 14, 1900.

The St. Louis board of education has adopted the Benn Pittman system of shorthand for use in the commercial department of the high schools.

Gen. Alfred C. Barnes, of the American Book Company, has been unanimously elected colonel of the Twenty-third regiment, N. G. N. Y. The election is a very popular one.

General Barnes has always been prominent in military affairs. He joined the Seventh regiment in 1860 but made application for transfer in 1862 when the Twenty-third was organized. He went out with the regiment and took part as sergeant at the battle of Gettysburg. His title of general was gained in 1879 when he became inspector-general of rifle practice for the state of New York.

Mr. E. O. Grover, who has been with Ginn & Company for some years and until recently held the responsible post of advertising manager with this firm, has been called to take charge of the educational book department of Rand, McNally & Company. Mr. Grover is a graduate of Dartmouth, '93. He is a man of fine artistic tastes. Many of the delightful illustrations in circulars recently issued by Ginn & Company were suggested by him to the illustrators.

By the way, Dartmouth is the *Alma Mater* of many of the brightest bookmen.

President W. J. Button, of the Werner School Book Company, expresses a new tendency in the preparation of reading books when he says, speaking of "Taylor's First Reader," which his firm is just getting out, "It is a book free from the mechanics of reading. It is believed that the best schools have far outgrown machine methods and machine-made literature for beginners in reading."

Mr. D. Van Winkle, of Thomas R. Shewell & Company, tells of large sales recently of the revised edition of Tilden's "Commercial Geography," a book that was the pioneer in the higher commercial education and that is beginning now to be appreciated as never before.

Mr. L. V. La Taste has returned to the employ of the University Publishing House. He held the position in Alabama of state manager of the Prudential Insurance Companies for two or three months, but old habits were too strong for him and he decided to return to the ranks of the bookmen. He is very welcome back.

Mr. Albert S. Smith has been given full charge of the New York map business of Rand, McNally & Company. This is a part of their trade which is undergoing tremendous expansion.

Mr. Francis Knowlton, formerly of Silver, Burdett & Company, has entered the employ of Newsom & Company. He will have charge of the metropolitan district.

Mr. J. D. Eggleston, Jr., lately superintendent of schools at Asheville, N. C., is now in the editorial department of the B. F. Johnson Publishing Company, of Richmond, Va.



Holophane Ceiling Globe.

Notes of New Books.

Elements of Physics, by C. Hanford Henderson, Ph. D., principal of Pratt high school, Brooklyn, and John F. Woodhull, Ph. D., professor of physical science, Teachers' college, New York. The authors are convinced that any satisfactory teaching of physics must combine recitations and laboratory work, while convenience demands separate books for the two. This book is designed for recitations only. It follows the conventional methods except that the conception of energy is amplified, and the term force is abandoned. Motion is treated where the older books treat force. Formulae are carefully introduced and clearly explained. Modern machines are well illustrated. The discussion of electricity is decidedly superior to that which usually finds a place in text-books. Light is left to the end, as the most difficult subject to handle, an arrangement that is open to serious question when the close relation between light and heat is considered. The introduction of photogravures of some leading physicists is a pleasing feature. (D. Appleton & Company, New York. Price, \$1.20.)

Elements of Physics, by Henry A. Rowland, professor of physics and director of the physical laboratory in Johns Hopkins university, and Joseph S. Ames, professor of physics and sub-director of the same laboratory. This text-book is eminently fitted for college study on the subject. Laboratory work is made of secondary importance. Hence, the subject is treated primarily by the mathematical method and rigid demonstrations given for all the phenomena. The treatment of the elementary forces and their resulting motions is made exhaustive. The formulae are well worked out and great care is taken to show how the molecular movements are subject to the same laws as mass movements. A careful study of the book will give excellent mental training. (American Book Company, New York and Chicago.)

L. R. F. G.

The Effects of a Magnetic Field on Radiation, edited by Dr. E. P. Lewis, assistant professor of Physics, University of California. This eighth volume of the "Scientific Memoirs," published by the American Book Company, gives the original records of the steps which have led up to the modern view of the essential identity of light and magnetism. Faraday showed that magnets affect a beam of light, and as far back as 1845, in a memorable paper read before the Philosophical Society of England, he proved that a change of some sort comes to light undulations when they pass thru a magnetic field. Later, by means of two Nichol prisms, he showed that this change is a rotation of the plane of polarization. Later Dr. John Kerr, of Glasgow, developed the conditions under which this rotation takes place, measured the amount, and calculated the formulas which express the relation. His two important papers, published originally in the *Philosophical Magazine*, are given in full. Dr. P. Zeeman, professor of Experimental Physics, in the University of Amsterdam, extended the examination to light from a candle and gas burner, and succeeded in causing the sodium lines to be widened by magnetic influences, and later in affecting other lines as well. This makes the circuit complete and shows a direct relation between the two forms of undulation. Dr. Zeeman's papers are also taken from the *Philosophical Magazine*. (American Book Company, New York and Chicago.)

L. R. F. G.

Anatomy Physiology and Hygiene for High Schools, by Henry F. Hewes, A. B., M. D. The study of the structure and the functions of the human body is now made a part of every good high school course. Dr. Hewes has written his book particularly upon the basis of energy. Starting with the cell, he shows how its division builds up the whole body; that its essential constituent is protoplasm, and that the body as a machine uses the energy which comes from the food and is transformed into the tissues before giving out that energy in the form of work. The different parts of the body are carefully described and the functions of each part are distinctly shown. The colored plates enable the student to see the relation of the various parts of the body, and are excellent. A long series of experiments is given, planned to be performed by the student, but unfortunately many of them require special apparatus not usually found in a high school. (American Book Company, New York.)

Elements of Arithmetic, by Ella M. Pierce, supervisor of primary grades, Providence, R. I. This book is intended for pupils of the third grade and carries on the work so successfully begun in the author's "First Steps in Arithmetic." It presupposes a knowledge of number facts to twenty and, in advancing, the lessons are sufficiently simple to fit them to the age of the children. Many pretty little pictures are inserted. The

author has developed certain principles in an original way; for instance, in the principle of addition and subtraction by endings the whole thirty-six combinations that make numbers to nine are reviewed at once, and this method is applied to numbers up to one hundred. Fractional terms are early illustrated and taught and are applied throughout the work in multiplication and division. (Silver, Burdett & Company, Boston, New York, and Chicago. Introductory price, 36 cents.)

E. W. TAPLEY.

Dido: An Epic Tragedy. A dramatization from the *Aeneid* of Vergil, arranged and translated by Prof. Frank J. Miller, University of Chicago, with stage-settings, action, and music by J. Raleigh Nelson, Lewis Institute. This dramatization of the love-story of Dido and *Aeneas* is a decided contribution to classical literature. The translation is wonderfully spirited. A few lyrics have been added in appropriate places, set to music in sympathy with the themes. Some of the longest scenes have been curtailed and connecting sentences have been introduced here and there, but the alterations and additions have been, on the whole, minor ones. The final tragedy of Dido's suicide is behind the scenes. (Silver, Burdett & Company, Boston, New York, and Chicago. Introductory price, \$1.00.)

E. W. TAPLEY.

Heroes of our Revolution, by T. W. Hall, illustrated by W. B. Gilbert and others. History is most readily acquired by stories of its leading actors. The author has selected all those most prominent in the revolution, particularly those renowned in its military movements, and has made the march of events hinge upon their personal exploits. The causes, direct and remote, which led to the revolt, are clearly stated and the patriotism of the fathers is made prominent. The bravery and perseverance which made those men heroes and which brought the revolution to a successful issue are clearly portrayed. The most prominent battles are detailed, yet in such a way as to show that war is in its essence barbarity, tho at times a necessity to maintain liberty or to found a nation. Thus the book is particularly suited for supplementary reading, and it is calculated to lead the youth to a true appreciation of all that has been done for the nation thru the sacrifice and sufferings of the forefathers. (Frederick A. Stokes Company, New York.)

L. R. F. G.

Taylor's First Reader, by Frances Lilian Taylor, is a textbook for which the matter was selected after a careful study of the child's taste and needs. This is a point in the making of modern reading books that should be carefully noted. Once little attention was paid to the child's preferences—it was enough if he learned to read; but it was found that he made more progress in the art if matter was such as aroused his interest. A large portion of the matter in this book consists of nursery rhymes and memory gems, as it has been noted that children teach themselves to read thru memorizing their favorite rhymes. New words have been introduced so gradually that the difficulties of learning them have been minimized, while the interest is intensified by a large number of appropriate pictures, a good proportion of which are colored. On opening the book the child finds a picture of the flag and some patriotic verses. Following is an explanation of the flag. Thruout the book reviews and phonetic exercises furnish word drills, and the abundance of script provides copies for learning to spell and write. (Werner School Book Company.)

The memorizing of extracts of beautiful literature is one of the most valuable parts of the study of English. Not long ago it was quite neglected in our best schools, for the old-fashioned declamations had fallen into disuse and nothing had come to take their place. Recently, however, teachers of English have been insisting upon a great deal of memorizing. *Common School Literature*, by J. W. Westlake is a book called forth by the present demand for good memory selections. It has the advantage of presenting a concise and satisfactory history of English and American literature. The extracts are arranged chronologically and are prefaced in each case by a neat little biography of the author. Hardly any writer of importance is left out. (Christopher Sower Company, Philadelphia.)

The addresses of the Memphis meeting of the Southern Educational Association have been collected and published in book form by the association. They constitute an authoritative volume regarding the present status of educational thought and practice in the South. The book is for sale by the secretary of the association, Mr. F. P. Claxton, Greensboro, N. C.

You have read of the cures by Hood's Sarsaparilla, and you should have perfect confidence in its merit. It will do you good.

The School Journal,

NEW YORK AND CHICAGO.

WEEK ENDING DECEMBER 1, 1900.

The Broad Field.

The city of New York has been again profoundly stirred by the discovery that certain forms of vice exist and flourish in spite of an army of stalwart and well paid policemen. What is true of this city is true of all large communities. This condition of things cannot but arrest the attention of the educator who looks at adult men and women, behaving, as so large a number of them do, as tho they needed an education possibly entirely out of his power to give.

He hears the accusations made against the inactivity of the police, and meditates whether the evils spoken of can be removed by policemen. Especially do those who have been in charge of the schools for many years in the districts complained of doubt the efficacy of the policeman's club to cure the evil. They have known these sections when there have been active and efficient officers and when they were the opposite.

While it is wickedness it is a form of uneducation. And the thinking teacher concludes, if he thinks largely, that the only way to cure this state of things is the very way he pursues daily in the school-room—being with the uneducated and inspiring them to go up higher. Not with text-books, of course, and so it is not a task for the public school teacher to cope with, but for that class of men and women who really want to educate the miseducated, the uneducated.

The first thought will be to turn to the churches and say, "This is your field; come ye into these sections and preach righteousness." The purpose is not to produce a prescription for the evil that is so painfully apparent; it is to look at the matter from the educator's standpoint. Will enough of society (meaning the well-intentioned of the city) be willing to do for the uneducated adults what the teacher is doing for the uneducated youth?

The large thinking teacher will say, whatever be the answer to this question, that this is the only way the evil referred to can be removed; not by the policeman's club, but by the sympathetic heart of humanity. The University Settlement recognizes this foundation truth and operates upon it. But why a University Settlement? Why not an Elementary School Settlement? In other words, why shall not the educators of the city (not necessarily public school teachers) make a Settlement in these unrighteous regions?

We believe the great step to be taken by teachers, the one that separates them from all other classes of persons, is to be dedicated to a fervent interest in the moral and intellectual elevation of humanity. The weakness of the profession is that it limits itself to benefiting the world by means of the spelling-book:

Dr. White's Criticism.

No man is more competent to give an opinion of practical value than Dr. E. E. White. He says:

"The public schools are not doing a tithe of what they should do to give our boys and girls refined and beautiful manners. I say it strongly, for on this one point I feel deeply the lack of training in the schools."

"And again I thank no teacher for telling my child pagan fairy tales. Paganism has gone thru human filth and degradation. No class of stories needs greater winnowing than these myths from the Greek and Hindu writings. It is not necessary to go thru this to reach the beautiful and elevating."

The classic myths have a place in human culture; we must know what those thought who preceded us, but they have been used altogether too miscellaneous. There is a lack of judgment that is inexcusable in pushing matters of this kind into the forefront.

As to the need of bringing refinement into the school-room, all will agree; and only those who know the actual state of the case can understand how this is lacking. Sitting beside a school principal one morning we saw a lad approach and present a note; it was an "excuse" of some kind. In a snarling tone the master said as he grasped the note, "So your father has the face to send me another, has he?" and threw it on the table. We felt that the boy was not to blame and that this exhibition of temper toward an absent parent was extremely discourteous and a lesson in bad manners.

Teaching How to Study.

The meetings of the Educational Council of New York and vicinity are, as a rule, the most profitable of any educational association in the metropolis. The discussions are in general so thought-provoking that it is no wonder the membership has increased one hundred per cent. this fall. Everybody is interested and serious. The desire is to learn from one another. Every proposition is put to practical test. Rarely is there any talking for the sake of talking.

The November meeting was as good as the best the council has had. Supt. Cole, of Rahway, N. J., opened the discussion of the topic "Teaching How to Study." He said that there were certain preliminary conditions to be met if we are to teach pupils to study properly. The school-room must be well lighted and heated. Each pupil must be absolutely left alone when studying; he must not be interrupted by whispering, note-writing, or any other disturbance. The mental environment must encourage to self-control and aid in learning studious habits. The most important factor, is, of course, the teacher himself. He must be a student himself if he would teach his pupils to study. He must really teach the art of studying; the training will be incidental but close attention to work becomes involuntary thru being voluntary first.

Supt. Cole suggested as among the advantages of knowing how to study, the saving of time, health, worry, and nervous strain. Children should be taught to do much in a brief space of time. They should be trained to close observation thru rapid reading, spelling, etc. They should learn to analyze, to get the thought from statements. There is need for memory training which is too much scorned these days. It is essential that children should comprehend just what we want them to study.

The council had a special treat in a short talk from Supervisor Robert C. Metcalf, of the Boston public schools. Mr. Metcalf is one of the few educators who, from personal experience, have watched the gradual changes from the old district school methods to those of the present day. He worked his way thru the little old red school-house, and he told the councilors that with the old district school the independent, self-reliant student had to a large extent passed away. Napoleon is said to have spent five days over a single mathematical problem. Probably by the modern teacher he would have been marked low in the study, but it was by such determined, persistent work that he gained the power which enabled him to conquer Europe.

The danger at the present time is that we do not throw pupils enough on their own resources. We try too much to carry them over the course of least resistance. Correct recitation is not the only thing to be sought; the struggle made in preparation is the main thing. Is it not a fact that the pupil is so much the product of method that when he reaches the high school, where the thought is more considered, he is at a loss? The teacher should neglect the pupil when he is to study.

Prof. Samuel T. Dutton, of the Teachers college, formerly superintendent of the Brookline schools, spoke on Educational Co-operation. A report of his talk will be given later.

New York City Examinations.

A number of important examinations for teachers' licenses in the schools of Manhattan and the Bronx are scheduled for February and March. The first will be an examination for teachers of French and of German, Feb. 25. Following that, applicant for the teaching of sewing will be examined Feb. 27; teachers of physical training, March 1; teachers of manual training or form study and drawing, March 4. The conditions under which these examinations will be held can be obtained from Supt. William H. Maxwell at the Hall of Education, 59th street and Park avenue.

Preliminary Plans for the Chicago Meeting.

The meetings of the Department of Superintendence of the N. E. A. will be held Feb. 26, 27, 28 in University Hall of the Fine Arts building, Chicago. Two evening lectures will be arranged for, both to be given in the same hall. Admission will be limited to members of the association. Pres. Arthur Twining Hadley, of Yale, has been secured to give the lecture on the evening of the twenty-sixth. One session of the meeting will be devoted to reports of what is actually being done in the subjects of domestic economy and manual training in several cities where this work is already well organized. One afternoon will be devoted to round table discussion, the superintendents of the large cities constituting one group, the state superintendents another. The remaining members of the department will divide up into probably three groups for the discussion of questions of special interest to superintendents.

The Blue and the Gray United.

One evening last week old soldiers and patriotic societies combined in a parade and presentation of two flags to the Bridesburg school at Philadelphia. Among the veterans was a former Confederate soldier dressed in his gray uniform. The greeting he received from the Grand Army men was an affecting one. The children and others who were present felt deeply that "The Blue and the Gray" were united. The band played "The Star Spangled Banner" and the object lesson in patriotism and national good feeling was inspiring indeed. Such scenes should be more common and those who participated in the great Civil war can do much to make reconciliation permanent.

New Jersey Child Students.

The recent meeting of the New Jersey Association for the Study of the Child and Youth, held at Newark, was attended by about four hundred people. Professor M. V. O'Shea, of the University of Wisconsin, gave an address in which he described the need of constant child study in teaching and governing and pointed out the powerful influence of example and suggestion in education. "We cannot blame children," he said, "for saying what is not true when we ourselves cannot repeat a story without coloring it as we think it ought to have happened." He laid particular stress upon the fact that children who are watched for misdemeanors will just so surely commit them. Inhibition, negation, and prohibition, he thought, were the three prime factors of a child's mental analysis, and he particularly animadverted on forcing a child to reflect on his shortcomings rather than leading him to strive for the attainment of a high ideal of life.

Miss Lillie A. Williams, professor of psychology in the New Jersey state normal school at Trenton, spoke on "Nervousness of Children." She pointed out some of the dangers of overtaxing nervous children, and the bad effects of fear upon the growing brain of such children. Defective eyesight she regards a potent cause of many children's nervousness. "Many children are born nervous," she said, "and over-stimulation to such is a very serious matter. Bad nutrition also makes nervous children, and special care should be given to cases requiring better diet. Over fatigue and fear often lead to St. Vitus' dance and epilepsy. Children so afflicted should

be at once removed from other children to avoid the danger of suggestion and association."

The Child Study Association was organized in March, 1899. At the recent meeting one hundred and forty-one enrolled as members, seventy-one of whom were of Newark. The success is due in large measure to the president, Miss Ada Van Stone Harris. The other officers of the association are: Supt. C. B. Gregory, of Trenton, vice-president; Prin. M. L. Cox, of the Ann street school, Newark, secretary; Supt. W. F. Chancellor, of Bloomfield, treasurer.

A New Kind of College Scholarship.

One of the most important experiments for the solution of the problem of beneficiary aid to students has been made possible by the will of the late Frank Williams, who bequeathed to Heigh university \$300,000, the income of which is to be loaned to poor and worthy young men. Every student who accepts aid will give his personal note to repay with interest at the end of ten years the amount advanced him. In this way the bequest will be invested at compound interest and ought, if the standard of common honesty among Schleigh graduates is high, to grow to large proportions. The argument in favor of loaning the income rather than giving it is that in many institutions the self-respect of the students suffers from their acceptance of large sums of money for which no equivalent is rendered. A man who receives help from a loan fund is still working his way thru college but is postponing a part of the "working" against the years when by strength and ability he shall be better able to earn large sums of money. He gets a chance by thus borrowing to go thru without burdening his needy relatives, injuring his own health or losing half his opportunities for social and intellectual improvement.

The problem is one with which Yale is wrestling and one which might well be taken up by other universities. At Harvard, for instance, there is no doubt that the scholarship system breeds a mendicant spirit among the poorer students. A bright young fellow can calculate upon capturing every year a \$300 scholarship which he may supplement by a Bowdoin prize or two. And in many instances young fellows who are not even bright get scholarships because they are candidates for the Episcopal ministry or because they are the only descendants in college of some Puritan worthy or because they happen to live in a certain town in eastern Massachusetts. These hundred or more scholarships in Harvard college were given with a laudable purpose; they actually do have a deteriorating influence upon the tone of the scholarly life of the university.

College English.

A fresh contribution to the voluminous literature on defective English in secondary schools is to be found in the annual report of Pres. W. H. P. Faunce, of Brown university, who complains because "the college must take men who have small conception of structure and style, a meager vocabulary, and slender acquaintance with English literature, and give them power of lucid and forceful self-expression."

The subject is one that certainly deserves all the attention that college authorities can give to it, but it would be foolish to take too optimistic a view of its possibilities. Good English is of a piece with good breathing, good walking, good eating, and good manners. Theoretically, an educated person ought to acquire all of these without special effort. Practically the limitations set upon average human nature are such that they are gained only by an intense and constant struggle. It is exceedingly efficient college teaching which can give the ordinary college student "power of lucid and forceful self-expression." Still, the ideal is the right one.

A Dedication Ceremonial.

This note from the Boston *Transcript* gives a suggestion for an appropriate ceremony when a new school building is opened. This ceremony was observed in connection

with lighting the fire on the hearth in the astronomical library of the new observatory at Wellesley college.

After Mrs. Whitin, the donor of the building, had unlocked the door and the guests had entered, President Hazard extended to Mrs. Whitin a graceful, loosely bound sheaf and said : "To light this fire I hand you a torch which represents the torch of life. In it are twined the symbols of the field, digitalis, sarsaparilla, eupatorium for the health of the body, a fern leaf for grace and beauty, the oak leaf and the elm for peace and the civic virtues. Here the evergreen of pine and hemlock represents the ever-aspiring life of the mind and the eternity of thought. To these are added rosemary for remembrance and pansies for thoughts. With these holy associations we light this fire, that from this building, in which the sun and stars are to be observed, true life may ever aspire with the flame to the Author of all light."

Immediately following this ceremony of lighting the fire came the singing by the college glee clubs of the appropriate hymn, "Stars above that shine and glow," which concludes, "Light and love descend till we heav'n reflected here shall see."

No Rum for Africa.

Recently a group of liquor merchants waited upon Joseph Chamberlain and protested against the restriction of their trade in Africa by laws which Great Britain has passed. He replied : "It is the policy of the British government to discourage the liquor traffic among the native races because it destroys all trade by destroying the population."

This was in pursuance of an international treaty, placing upon liquor, designed for Africa between latitude 22° south and 20° north, a tax of 52 cents a gallon, which is considered prohibitory for the natives. Already the treaty has been signed by Germany, Belgium, Spain, France, the Congo Free State, Great Britain, Italy, Holland, Portugal, Russia, Sweden and Norway, and Turkey, but not yet by America. It has been in the possession of the senate since December 1, 1899.

Depths in the Pacific.

Within the last year or two the submarine abysses of the Pacific have been explored more thoroughly than ever before. Rear Admiral Bradford, of the United States navy, has made soundings of a vast and almost level plain of soft mud, with a depth of 2,700 fathoms extending from Honolulu to the Midway islands, and another about 500 fathoms deeper between the latter and Guam. A feature of this marine territory near Guam is the presence of an isolated mountain peak which rises to within 85 fathoms of the surface.

Soundings have also been made along a great submarine mountain range which extends from the coast of Japan to the Bonin islands. One peak of this, which comes close to the surface, has been found to resemble closely in outline and bulk the famous mountain Fujiyama in Japan. North of this range is the great Japanese Deep which was formerly supposed to hold the record for depth. A still deeper ocean cave, however, has lately been discovered in the so-called New Deep, where the plummet has reached bottom at 5,269 fathoms or 31,614 feet.

Chelsea, Mass., is justly proud of the character and length of service of the members of its school board. Changes very rarely occur except as the members die or resign. Recently two committeemen left the board who had been in it continuously for over twenty years. The city keeps good men and women in service just as long as they will consent to act and put pressure on them if they show a desire to resign. Political influence counts for nothing in the selection or retention of the members. The result of such conditions is that Chelsea has an admirable school committee, one that is in marked contrast to the disorderly board across the Mystic.

Recent occurrences in text-book manipulations have convinced some of the leading citizens of Providence, R. I., that the whole method of choosing the school committee must be revised. To begin with, the board is too large. It consists of thirty members, three from each ward, besides three members *ex officio*. It is a known fact that a few men do all the work, the majority being content to appear occasionally at a meeting.

One of the most zealous advocates of revision is Mr. Stephen O. Edwards, who for three years has been the leader of the reform element in the committee. He is in favor of a board of only five men. They would necessarily be taken at large from the city. The commission is to be appointed by the mayor, one each year, to serve for a period of five years. A man who is qualified to be a mayor for more than one year, would be certain to make good appointments. Other prominent citizens have expressed themselves in favor of a board of from three to seven members.

The theory of Lombroso that crime was the result of physical formation is a good deal doubted. He held that some children reverted to the animal type from which it is believed that man has evolved. Dr. Thomas Wilson, in his address before the American Association, declares that crime determines the physical structure and that environment is more responsible for crime than heredity. This is undoubtedly the opinion of most teachers. A case was lately cited by a teacher in Brooklyn : A child was born in a family and, on account of sickness, given away to a family in the country and its name changed ; he grew up an upright man. Seven others afterwards born in the same family became disreputable in various ways.

The citizens in various municipalities are being aroused to act concerning the presence of youth in the streets at night ; this is really co-operation with the schools. It is a good move. Youth should be at home in the evenings ; that is the place for them instead of roaming in the streets. Let the teachers co-operate with those who labor to aid the family, the home, and the school.

Several readers have written concerning a recent editorial note on the need of constant cultivation of cheerfulness on the teacher's part. A few of them suggest that it is almost impossible to keep up spirits in the humdrum of daily duties, but all say they will try harder than ever before, to enter the school-room with smiles of cheer and words of encouragement.

Cheerfulness can be cultivated, even if the right mood for it is lacking. Practice is needed here as elsewhere. When matters are not what you would like to have them, be thankful they are not worse. The jolly Scotch grave-digger who was afflicted with a painful cough had the right recipe for cheerfulness. When he was asked how he managed to be always in good humor in spite of his malady he pointed to the graves around him, saying, "There's many a one here would be glad to have that cough." This is sound philosophy. Cultivate the habit of looking at the bright side of things. Be forever on the lookout for things to commend ; and be joyful.

The fact is often referred to that the teacher is becoming interested in the events of the world outside of his school-room and that he tells his pupils about them. That this was sure to come about was pointed out in these pages many years ago ; the publication of *Our Times* was undertaken. A paper suitable to be put in the hands of the pupils is essential,—it must be *handy*, *not too extensive*, and *cheap*. Some valuable papers are issued, but they are too extensive ; there is enough reading to keep a boy so busy that he can do nothing else. *Our Times* is a neat magazine costing only 40 cents (in clubs) and gives all that is needful—the really important news. Let the teacher send to E. L. Kellogg & Co., for a free sample.



PROF. B. A. HINSDALE,
of the chair of pedagogy in the University of Michigan, died at
Atlanta, Ga., on Thanksgiving day, as a result
of nervous prostration.

It is very unfortunate that two of the three women members of the Philadelphia board of education, Miss Anna Hallowell and Mrs. Mary E. Mumford, have decided to resign. They have uniformly been on the side of progress and reform in school management and have won golden opinions for themselves and for their sex. Their retirement will leave but one woman in a board of forty-one members.

A most questionable plan has been put into practice by the National Founders' Association in their effort to crush the strikers in the Cleveland foundries. They are offering to men who will take the strikers' places the regular wages \$2.75 a day and a bonus of \$2 a day, making a total of \$4.75. The striking molders were asking for an increase of 10 cents a day in their wages. Of course such a plan is bribery pure and simple. It is an attempt, which is sure to be unsuccessful, to destroy the labor union.

The determination of the New York city government, actuated by Mr. Croker's order, to take drastic measures for stamping out east side vice will result in a temporary purification. The police captain of the offensive district has been removed and a model of good manners and tact put in his place. Everything is being done to secure improvement. Whether this will be permanent or not—who can tell?

A professor in the University of Chicago is said to use, in his teaching, such slang phrases as the statement that a king "got the bulge on" his opponents, and did "any old thing" he pleased. His excuse is that he is teaching dead history in live English.

The partition of China has again become a burning issue in international politics. Negotiations have reached so serious stage. The powers are demanding indemnities a excessive that the country is bound to go bankrupt. To meet that expected contingency, the powers will demand either immediate partition or territorial pledges—mortgages as it were on Chinese property which are certain to be foreclosed. Just what the attitude of the United States government will be is a matter of grave concern. It is believed that rather than enter into a land-grabbing scheme our government will withdraw altogether, leaving its share of the indemnity unsettled.

The Pennsylvania Academy of the Fine Arts has accepted from the board of control of the Society of American Artists, a picture called "The Canal" by the late Theodore Robinson. This is the picture which was offered some months ago to the Metropolitan Museum of Art and was rejected.

Letters.

The Making of School Laws.

The schools of Porto Rico are administered under a law, less than two years old, which was written by Gen. John Eaton, for sixteen years, United States commissioner of education. General Eaton was a stranger in Porto Rico, and necessarily his law required modifications, some of which were made by those in authority during the past year, and from the experience gained as to the actual needs of the islanders.

The present commissioner of education in Porto Rico, after a residence of two months in the island, announces that the law of Gen. Eaton should be almost entirely annulled, and a new law written.

It is the purpose of this communication to call attention to the fact that numbers of Americans who visit our new insular possessions have the idea that they can correct all that is wrong in the existing social and political conditions by laws correctly formed, and that they are the persons to formulate the laws exactly suited for this purpose. It is affirmed, after a two years' residence in these islands, and a careful study of the people and their needs, that no stranger can produce laws which will fit existing needs and conditions.

Under the military government, this was constantly tried, and, while many obnoxious Spanish laws were properly repealed, it has been most difficult to formulate successfully new laws to take the place of the old ones. The new laws of Spanish America must be the result of a slow evolution, and cannot be made Minerva-like, perfect at once. The islands cannot be Americanized in a single generation, and the work cannot be done at all by those unacquainted with the people.

The school law of General Eaton accomplished these things in Porto Rico, and almost *absolutely without opposition*.

1. A school term of nine months was established, with vacations on Saturdays (under the old law, schools were open twelve months in the year and six days in the week).

2. The schools were all placed under American supervisors, each officer having charge at the present time of about fifty schools.

3. The old text-books were all removed from the schools and 100,000 American text-books introduced.

4. All religious instruction in the schools is forbidden, and the school houses may not be used for religious purposes.

5. The study of the English language is made compulsory in all the schools.

6. Provision is made for American teachers to teach the English language.

7. The teachers formerly had life tenures in their schools. This status, legally or illegally, has been dissolved.

8. The law does not permit teachers to reside in the school-house. At the close of the last school year, this law was known to be violated in but a single instance, and in that case only because there was no other house in the district of the teacher.

9. High schools, normal schools, college, technical schools, and a university are provided for in the system.

10. The native teachers were all required to take out new licenses, issued by the American administration.

11. The law establishes a local school board in each municipality. All these great changes have been accomplished under the Eaton law, or under amendments to it made by the military government. The incoming civil government has rendered some features of the law obsolete, still, it is a good working law, and it would probably weaken the advances already made to discredit entirely this work of a veteran educator. Rather modify and improve the existing law, than wholly destroy it.

GEO. G. GROFF,
Late Superintendent of Public Instruction in Porto Rico.

THE SCHOOL JOURNAL

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The Educational Outlook.

School Committee Washes Its Hands.

BOSTON, MASS.—Thousands of children of school age in Boston are without educational advantages thru no fault, so it is claimed, of the school committee. A cry of duplicity between state house and city hall has been raised. It seems that last winter a bill was introduced into the legislature authorizing the city to negotiate a loan of \$3,000,000 for school building purposes. This bill was vetoed by Governor Crane upon the ground that it was not necessary; that the city could raise such a loan without legislative sanction.

This fall the city council supposing itself thoroly competent, passed a loan bill for school building purposes—a bill which, to their utter astonishment, was vetoed by Mayor Hart on the ground that the city could not negotiate such a loan without the authority of the legislature.

The school committee has issued a report ending with the statement that, as a result of the arrangements between city hall and state, house the school committee is left without a single dollar at its disposal for the construction of absolutely necessary school buildings.

This report of the school committee went to Mayor Hart who respectfully returned it as containing language and insinuations both unparliamentary and unsuited to the good cause of education. In regard to the allegation of duplicity, Mr. Hart says that in vetoing the school-house items in the loan bill he was simply acting upon the advice of Corporation Counsel Bailey.

Expensive Economy.

DETROIT, MICH.—The school board is learning a lesson in the purchase of coal. Supposedly in the interest of the taxpayers a winter's supply of "slack" coal was laid in. This coal contains a great deal of fine dust which is easily converted into a dangerously inflammable gas. Already the big coal piles in the various basements of the public schools are smoldering and have to be kept in check by constant applications of water. This has a chemical action which results in the coal being deprived of a good part of its gaseous products and reduced to a very poor quality half-made coke.

Proposes to Close Schools for a Year.

ATLANTA, Ga.—A startling bill was recently introduced, in the state senate, by Senator Thomas Baker. It calls for nothing less than to close all the public schools, for a year, as a means of saving money to discharge the debt that now rests heavily upon the public school fund. A peculiar feature is the controversy among state officials as to whether there is any school debt at all. School Commissioner Glenn says there is none. The school appropriation is made yearly and the schools are conducted within that amount approximately. Mr. Baker's claim to the existence of a debt is based on the fact that some years ago, in order to keep the taxes down, the sum of \$400,000 was taken from the reserve fund for school purposes. The act which authorized the use of this money provided that it should be paid back out of the school fund. Mr. Baker's bill carries not only the proposal to close the schools, but also other provisions for supplying the deficit.

Program of the Associated Academic Principals.

The sixteenth holiday conference of the Associated Academic Principals of the State of New York will be held in Syracuse, December 26-28. The following program has been prepared:

To what extent should the high school be graded? Prin. F. S. Fosdick. Nature Study: *a*. Its aim and purpose, Prof. L. H. Bailey; *b*. Its application to public school work, Supt. D. L. Bardwell, Prin. J. D. Wilson. The place of music in the high school course, Prof. E. A. Gowan.

History—A continuation of the work outlined at the last meeting. (Conducted by Inspector E. W. Lytle.) *1*. History on stone and canvas, Prof. Lucy M. Salmon; *2*. Defects of history teaching in the high schools as revealed in college, Prof. Wm. H. Mace, Prin. James Winne; *3*. History in the grades—what is possible? desirable? Prin. H. J. Walter, Supt. Geo. Griffith, Prin. Myron T. Scudder. The historical exhibition will be open thruout the session. Exhibit (*a*) Text-books for reading, books for reference; (*b*) maps, charts, pictures, and other aids; (*c*) history work from the schools.

Ways and means in cases of absence, tardiness, and disaffection, Supt. T. H. Armstrong. Rational Education, argument by Dr. Lawrence T. Cole, discussion by Inspector Charles F. Wheelock and Supt. A. B. Blodgett.

Discussion of Prof. Munsterberg's paper on "School Reform." Opened by Prof. Charles De Garmo.

The railroads have granted the customary reduction of one fare and one-third on the certificate plan. Information is to be had from Pres. Charles W. Evans, of East Orange, N. J., or from Secy. S. Dwight Arms, Albany.

Subscribers to *Educational Foundations* will receive a copy of Tate's monumental "Philosophy of Education," as the December issue of the magazine. This work is one that ought to be in every teacher's private library.

Chicago and Thereabout.

Appeal to the Citizens of Chicago.

An open letter to the citizens of Chicago has been sent out by the Teachers' Federation, protesting against the proposed deduction from the salaries of the 600 grade teachers for the benefit of the special teachers of kindergarten, German, and household arts. The attention of the public is respectfully called to the history of the salary schedules since the memorable increase in 1898 which would, if carried out, have given teachers of ten years' experience a salary at least equal to that of policemen, firemen, and other employees of the city. The loss for 1900 inflicted upon grade teachers of seven years' service thru the miscarriage of the '98 schedule is already \$145; the teachers object to having that loss increased by several dollars more. An effective comparison is made in the report when the question is asked what would be thought of the managers of one of the great department stores of Chicago if, when an unexpected emergency arose, they should decide to close their business for a week to effect a corresponding saving in the salaries of employees. This is exactly the shortsighted sort of policy that the committee of school management and finance seems likely to adopt.

Favor Electives in High Schools.

An educational conference of the schools affiliated with the University of Chicago was held November 18, in Cobb Hall of the university. President Harper presided. The general topic for discussion was "The Value of Electives in the High School System."

Supt. A. F. Nightingale of the Chicago high schools, led the argument for greater freedom. The sum and substance of his contention was that the "high school is the place where the needs of the individual should be adopted. There should be no fixed curriculum."

Supt. Cooley also came out strongly in favor of an elastic program. He holds that the elective system makes it possible to advance the bright student as fast as he should go and to hold the dullards along for what they can get. He does not believe that the number of studies to be taken should be presented. Many a slow boy is better off for carrying only two studies while his clever comrade will find five or six no burden.

The elective system for secondary schools was opposed by Dean John J. Schobinger, of the Harvard school, and by Prof. William Gardner Hale, of the Latin department of the university.

A Plea for Physical Exercise.

The conclusions to be arrived at from the now famous measurements of the Chicago school children were recently presented at the Academy of Sciences by Dr. W. S. Christopher, member of the board of school trustees. He said that the very first practical conclusion to be deduced was that the schools ought to have gymnasiums thoroly equipped for instruction in physical exercise. It was shown in the investigation that the more children are subjected to hard study without proper exercise the slower is their progress. Each public school in Chicago should be equipped with facilities for keeping the physical and mental development of the children along side by side.

Another criticism made by Dr. Christopher related to the desks. It was found that in all the older school buildings the desks were of a uniform size and, in many cases, not even adjusted so as to fit the average size of the pupils. In the newer school-houses, where adjustable desks have been put in, this evil does not appear. It ought to be done away with everywhere, whatever the expense.

A Big School Center Planned.

Some of the school trustees are trying to get the board of education to be its own landlord on its valuable property at State and Monroe streets instead of leasing the estate. An elaborate scheme of converting the five-story building which now stands on the site into headquarters for the board, including recommendations for a commercial college and a manual training school, has been unfolded in board meeting and referred to the school management committee.

Teachers to Invoke Criminal Code.

The state board of equalization thus far refuses to act. The Teachers' Federation has called attention with proof indisputable to the fact that franchise property worth at the lowest estimate \$235,000,000 last year escaped taxation. The leaders of the federation have cajoled and coaxed and threatened the state board.

But the board remains obstinate. It will not recognize the teachers' federation. Legally it is not obliged to. Against the board the federation has no redress. Against the members as individuals, however, something can be done. Evidence is already being collected to show malfeasance in office on the part of several members of the board. There are criminal statutes which Attorney Greenacre will invoke in behalf of the federation. He has announced an intention of "teaching these men a wholesome respect for the law."

A Victory for the Federation.

A later report from Springfield is to the effect that the federation leaders have won a point in their contest. Judge

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James A. Creighton of the circuit court has decreed that the petition of the school-teachers for a writ of mandamus to compel the state board of equalization to assess the capital stock and debt of the franchise corporations of Chicago must be answered.

This does not necessarily mean that the federation will win out, but it does mean that the policy of ignoring the demands can no longer be pursued. The state board will now have to face the question fairly.

New England Notes.

School Committee Election.

The opposition to Superintendent Seaver and certain members of the Boston board of supervisors last summer has awakened unusual interest in the election of the successors to the eight members of the school committee whose terms expire in December. President Eliot's charge that school committees are now the greatest danger to the schools, has served to add to this interest. One of the labor unions, in reply to his assertion that the larger part of the members of the committees pay no taxes, claims that the men of wealth on them have always been the party in opposition to progress, while those who are without property have always striven to advance the interests of the children thru education. The result of all this discussion is that the Public School Association has selected an exceptionally strong list of candidates, and are calling upon citizens to support them without regard to any question save that of personal qualification. Only good can result from the agitation.

East Boston High School.

Mr. William H. Godfrey has been appointed master in the East Boston high school. The teachers and pupils of this school are looking forward anxiously to the time when they can leave their present crowded quarters for the new building which has been in process of construction for the last two years.

Old School Boys' Reunion.

A large number of the former members of the Eliot, the oldest grammar school in Boston, dating from 1713, enjoyed a dinner and reunion November 15. Among the speakers were Mr. Ebenezer Alexander, of the Franklin Savings bank, who said that he could stand in the door of his place of business and see the spot where he was born, a fact which shows the great changes taking place in the old city; Mr. Francis Bacon, of New York, who paid a fine tribute to the city's schools; and Mr. Martin L. Bradford, who spoke of the changes going on in banking. Mr. Granville S. Webster, master of the school, spoke particularly of the coming of so large a number of Irish, Jews, and Italians into the district, and he detailed the steps taken to train their children to become good American citizens. Mr. Thomas Hills declares that the refinement of education has been carried too far; that too many studies are today forced upon children in the grammar schools of Boston, studies which properly belong to the high school curriculum. The children get only a smattering of things as a result. It is like trying to put two quarts into a pint pot. The graduate of a grammar school often cannot add a column of figures correctly or do a sum in interest.

Ornithologists' Union.

These friends of the birds met in the Agassiz museum, November 14, for their eighteenth congress. The early morning session was given to papers in memory of Dr. Eliot Coues and George B. Sennott, ex-members who have died within the year. Dr. Coues, famous as a scientist, was an army surgeon who gained eminence by making use of his intervals of rest in the study of nature and particularly of birds. Mr. Sennott was a successful iron manufacturer, but we owe our knowledge of the valley of the Rio Grande to his vacation labors.

After these papers, Mr. Herbert K. Job illustrated the new art of wild life photography by a considerable collection of pictures which afford an insight into bird housekeeping that can be obtained by no other means. He detailed peculiarly interesting experiences on the Magdalen islands and in the maritimes provinces.

Mr. John N. Clark, in a paper on "Dooryard Ornithology," revealed what can be done in science by making use of what is right at hand. Mr. Clark lives at the mouth of the Connecticut river and has a dooryard of about one acre. Here he has counted visits of more than a hundred species of birds, not counting large birds like geese, ducks, and ospreys, which fly over. Other papers of interest were read by Frank M. Chapman who dealt with the difficult subject of the migrations of the meadow larks; by Jonathan Dwight, Jr., and others on the plumage changes in birds.

Harvard University.

President Eliot, of Harvard, has gone to Europe for a vacation, the first time for many years that he has left his duties to be performed by another. Dr. Henry P. Walcott, of the class of 1858, chairman of the state board of health, and a fellow of the American academy, has been appointed acting president for the time of his absence.

The complete registration of the university shows 4,273 students in all departments, 2,500 of whom are undergraduates, 507

being in the Lawrence scientific school, and 1,993 in the college. Of the professional schools, the law school stands first with 645 students; but the medical school crowds it close with its 591 students. The only department which is not in a prosperous condition is the veterinary school, to which no new students will be admitted unless some friend comes forward with a sufficient endowment to warrant its continuance.

At the monthly meeting of the Cambridge club, on the evening of November 19, the subject of discussion was "The University in its Relation to the Town." Prof. Francis G. Peabody held that the city and the university make a unit. The university needs constant contact with the realities of the outward world to redeem it from monastic seclusion and academic exclusiveness. The city requires the elevation of its ideals and rescue from the spirit of commercialism. Then both together form a single body. Hon. George A. Marden and Prof. Ephraim Emerton emphasized the spirit of mutual helpfulness which obtains in Cambridge even more than elsewhere. It seems as tho the ancient enmity between town and gown bids fair to end there, at least at no very distant day.

Lecture on the Voice.

At the meeting of the New England Woman's club, November 9, Prof. Mary A. Currier, formerly of Wellesley college, gave a lecture on "The American Voice." She emphasized the fact that since the voice is an index of character, the soul must be cultivated to insure a pleasing voice. There are radical defects in the tones used in this country, and they are not confined to any locality, for nasal, high, shrill, and harsh voices can be found in cultivated Boston. Reverence largely modulates the voice, and its lack has much to do with the appearance and tones of American children, for they strive to carry a Fourth of July swagger at all times. In short, the voice can only be ideal when it is the expression of an ideal character.

National Academy of Science.

PROVIDENCE, R. I.—The National Academy of Science met in Wilson Hall, Brown university, November 13. The academy was incorporated by Congress, March 3, 1863, allows no more than one hundred members, carefully selected from the most eminent men in the country, and by the terms of the law must investigate and report upon any subject in science or art, of public interest, when called upon by the government so to do. In the past, the value of the unit of electrical resistance, the ohm, has been determined, and a forestry policy has been recommended to the government.

The important papers presented at this meeting were "The Cub Voltmeter," by T. W. Richards; "An Account of the Study of Growing Crystals by Instantaneous Microphotography," also by Mr. Richards; "The Development of the Pig," and "Normal Plates Illustrating the Development of the Rabbit and the Dogfish," both by Dr. C. S. Minot, of Boston; "Note on the Energy of Recent Earthquakes," by Dr. T. C. Mendenhall, of Worcester; "Spectrum of Sodium in a Magnetic field," by Dr. A. A. Nicholson of Chicago.

Briefer Items.

Dr. O. W. Huntington, principal of Cloyne House, a fashionable boarding school at Newport, R. I., met with a serious accident by an explosion in his laboratory November 10. One of his eyes was destroyed, and it is feared that the sight of the other will be impaired. He was taken to Boston for treatment.

The annual report of the school board of Portland, Me., recommends a general increase in the salaries of the teachers, which are now below those generally paid in New England. Portland employs 220 teachers, 17 of whom are men; has an enrollment of 8,307 pupils, and expends \$155,291 in support of the schools.

Dr. George P. Fisher, professor of ecclesiastical history in the Yale Divinity school, has tendered his resignation. Dr. Fisher was graduated from Brown university in 1847, and became professor of divinity and college pastor at Yale in 1854. In 1861 he was transferred to his present chair. His resignation takes place next year at the close of the bi-centennial celebration.

Mr. Alonzo J. Knowlton, of Belfast, Me., has been elected teacher of science in the Plymouth, N. H., normal school. He is a graduate of the Normal school at Castine, Me.

CAMBRIDGE, MASS.—Two members of the Cambridge school committee have just resigned, leaving three vacancies which cannot be filled until the next general election. The resigning members are Mrs. Carrie E. Fairburn, who is forced to give up on account of pressure of other duties, and Rev. Robert E. Ely, whose numerous lecture engagements take him away from the city very frequently. Both were valued members of the committee.

SOMERVILLE.—The school authorities have closed the Jackson primary school until December, because two of the children of the janitor have diphtheria. The janitor lives in the building, as do all the janitors of schools and churches in the city and vicinity, a result of numerous incendiary attempts to burn these public buildings, some thirty years ago.

WORCESTER.—The Schoolmasters' club held its annual banquet November 17, the subject for discussion being "Old

Fashioned Doubts About the New Education," called out by a recent article in the *Monthly* (see THE SCHOOL JOURNAL for October 27). Among the speakers were Prof. C. F. Hodge, of Clark university, President T. C. Mendenhall, of the Worcester Polytechnic institute, Supt. C. F. Carroll, Prin. E. R. Goodwin, of the classical high school.

LOWELL.—The trustees of the Lowell textile school have adopted plans for a new building, eighty by two hundred and sixty feet in size, to cost about \$90,000. Work upon the foundation is to begin at once. The state of Massachusetts and Mr. Frederic F. Ayer, of New York, have given \$35,000 each towards its erection, and it will be named Southwick hall, in memory of the father of the late Mrs. J. C. Ayer. Its location is such as to overlook the foot of Pawtucket Falls, the source of Lowell's great water power.

Mt. HOLYOKE.—On Founder's day, November 9, the first student who registered in the school on November 8, 1837, Mrs. Wealthy Shepard Cooley, of Chicopee, was present at the exercises. Dr. McCullagh, of Worcester, gave a scholarly address. The feature of greatest interest was the announcement by Dr. Judson Smith, of the board of trustees that Mr. John Dwight had increased his gift for the new art building to \$75,000; and that someone whose name is to be kept a secret has given \$50,000 for a new dormitory to be named Mead hall, in honor of President Mead.

PROVIDENCE, R. I.—The alumnae of the Academy of the Sacred Heart of Elmhurst, held a meeting November 21, the occasion being the celebration of the centennial of the order. Some of those who gathered had not met for many years, and the church of the convent, in which the exercises were held, was transformed from the usual bare room into a scene of splendor. A formal meeting of the alumnae was held and an organization perfected, with Miss Helen Goesman as chairman, and Miss Louise Imogen Guiney, secretary. The alumnae voted to raise a special fund to be used for any purpose the convent should desire.

PORTLAND, ME.—Prin. Robert L. Alexander, of the Orris Island school, was drowned on the afternoon of November 21. He was going to the main land in a skiff, and when he didn't return to his home on the island at night, search was made for him and his skiff was found. He was the only son of Isaac Alexander, of Harpswell, was twenty-three years old, and was graduated from Bowdoin college in 1898.

HANOVER, N. H.—Dartmouth college is engaged in one of the most notable experiments of the time thru the Amos Tuck School of Administration and Finance. This was founded, it will be remembered, by Edward Tuck, who last spring turned

over \$300,000 in securities to the college for the purpose. Its plan is to give the college graduate who purposes to enter business two years of study of the principles upon which the transactions of commerce rest, so fitting young men for positions of responsibility. President Tucker is the head of the school. Prof. F. H. Dixon, assistant professor of economics has charge of a course in finance and transportation. Mr. John E. Allen, Harvard law school, '97, is giving the course in commercial and corporate law. Prof. Colby has charge of the work in constitutional and international law. Prof. Justin A. Smith deals with commercial and colonial history, and Prof. D. C. Wells with demography and social institutions. Lectures will be given upon banking securities, investments, insurance, legal conditions of international trade and related subjects.

Philadelphia Notes.

Mr. Rudolph Schiller Walton, member of the board of education from the Twenty-first section, died recently. Mr. Walton had served on the board eight years and was well-known in educational circles.

Miss Anna Hallowell and Miss Mary E. Mumford, members of the board of education from the Seventh and the Twenty-ninth sections respectively, have presented their resignations to the board. Miss Hallowell was the first woman to be appointed to the school board, and Mrs. Mumford has served for eleven years. Both ladies are well known as active workers for the advancement of women. Their retirement leaves but one woman among the forty-one members that constitute the board.

New Rules for Teachers.

The board of education has instructed Supt. Brooks to issue a circular to teachers to the effect that no half sessions shall be held except when the pupils' health would be endangered by returning to school in the afternoon. Another new rule provides that pupils are not to be sent upon errands by teachers unless urgent necessity require it. They do not define the term *urgent necessity*.

Joseph Jefferson at the Normal.

Mr. Joseph Jefferson, the veteran actor, recently talked to an audience of more than fifteen hundred girls from the normal school, the school of practice, and the commercial high school, who gathered in the assembly-room of the girls' normal school. His subject was oratory, and after showing the necessity for early preparation in all branches of art, he marked the distinction between the characteristics of an orator and the attributes of an actor. The lecture was interspersed with many humorous incidents and was heartily enjoyed.

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In and About New York City.

An admirable plan which Pres. Miles M. O'Brien, of the New York board of education, is about to put into operation is one to make the public school-houses serve also as public libraries. The collections of books which will be installed will be for the use, not of school children, but of working men and women. The idea is that a great many adults, especially those of foreign birth, are quite as much in need of instruction in history and geography and similar subjects as are small children and the libraries will be especially strong along this line. The plan contemplates beginning with eight school buildings, four on the far East Side and four on the far West Side. An initial appropriation of \$15,000 has been made which will be used for payment of the salaries of librarians and other expenses.

The Society for the Comparative Study of Pedagogy will hold its December meeting on Monday, December 3rd, at 8 o'clock, in room No. 2, of the school of pedagogy, Washington square, north. Mr. J. Reigart, of the Ethical culture schools, will open the discussion on the subject "Certain Phases of Manual Training."

Mr. R. C. Metcalf, supervisor of public schools, Boston, was the lecturer before the Society for the Study of Class Problems at its meeting of November 17. Mr. Metcalf's theme was "English in the Elementary Schools." He said that in teaching English the chief points of attack should be in the direction of accuracy and facility. One should guard, however, against pointing out every trifling mistake. In marking compositions it is a sheer waste of time to blue-pencil every error. The thing is to point out a few characteristic mistakes and have the child correct them. One thing at a time should be the rule in teaching English. Too many teachers try to call attention to all the possible slips at each correction. Above all else the teacher should avoid discouraging the pupils.

The faculty of Teachers college has decided that henceforth candidates for the higher diploma must pursue their studies in residence for a minimum period of one year, after having completed the courses in the history of education, principles of education, critic work and practice teaching, or substantially equivalent courses in an approved college or university. An examination in these courses will be held annually, at the beginning of the first half year in order that new students may have an opportunity of meeting these requirements and of proving their fitness for advanced work in education.

The Lecture System for Brooklyn.

Brooklyn borough is to have a course of free lectures to the people similar to the plan followed in Manhattan for several

years. The board of estimate has allowed \$10,000 for this purpose in its budget. It is purposed to establish centers in the most densely populated parts of the borough and in some of the outlying districts which were formerly separate communities. The lectures will begin January 1.

Borough Supt. Edward G. Ward has been advocating these free lectures for a long time and now feels highly gratified at the success attending his efforts. Associate Supt. Edward B. Shallow, who has been assigned to the superintendence of the lecture system, has already arranged a tentative program for lectures at sixteen centers. He is a man of energy and resource, and his appointment argues well for the success of the department.

Each Citizen Pays Five Dollars.

The tabulation that has just been made of the finances of the board of education reveals some interesting facts. The average annual cost of maintaining the school system in Manhattan and the Bronx is \$4,775 for each citizen. In Brooklyn it is about even \$5. In Queens it is \$7.43 and in Richmond \$6.91.

These figures show that the cost of education to the city has almost doubled in the past ten years. The average school-teachers' salary in 1890 was \$738.24. In 1893 it had risen to \$762.80; in 1897 it was \$804.48. The year following at the time of the consolidation it stood at \$869.03. The Davis law brings it this year up to \$1,031.86 and by January, 1902, it will be \$1,286.59.

The average annual cost per pupil has increased by leaps and bounds from \$25.98 in 1890 to \$38.37 this year.

Controversy over High School Site.

Several members of the board of education are objecting most strenuously to the site that has been selected for the boys' high school. The location is on the westerly side of Tenth avenue, between Fifty-eighth and Fifty-ninth streets. It is rather far west and is, these members say, too close to the neighborhood known as Hell's Kitchen. They are therefore trying to secure consideration of some other more central site. The controversy is unfortunate since it is holding Architect Snyder back in his plans.

The League Exhibit to be Shown in England.

Mr. Howard J. Rogers has asked the New York Art Students' League to allow its Paris exhibit of school work to be sent with the Educational Exhibit to Manchester, England. The technical instruction committee of the latter city has asked for this exhibit that it may be set up in the hall of the new technical school for two months. The exhibit will be returned to Paris to be placed in the National Musee Pedagogique as the gift of the League.

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Interesting Notes from Everywhere.

ATLANTA, GA.—A local newspaper is planning to take a trainload of school children to Washington, to witness the inauguration of President McKinley. It offers prizes to public school teachers for the best method of making a selection of two children from each of the seventeen schools of the city.

KANSAS CITY, MO.—W. J. Berkowitz, a prominent manufacturer, recently addressed the people of the manual training high school upon "The Relation of Manual Training to the Industrial Development of the City." He spoke very entertainingly upon the opportunities of such a school for doing service to the commonwealth and urged the pupils not to confound commercialism with gross materialism. The true commercialism should be inspired by high ideals.

SOUTHOLD, L. I.—The board of education of union free school district No. 5 called a special meeting Oct 21, authorized the purchase of a site for a new school-house and took other preliminary steps. They now find that the meeting was illegal and all their preparations will have to be made over again at the next regular meeting, which will occur in December. They will be fortunate if they get the new building, which will cost about \$12,000, completed in time for the opening of school next fall.

ALBANY, N. Y.—The "Teacher's Burden," was the topic of an address by Dr. J. G. Wight, of the girls' high school, New York, at the ninth annual meeting of the Hudson River Schoolmasters' Club. Dr. Wight took the position that one of the greatest burdens now placed upon the college graduate who would teach is the useless professional study that is required of him. He held that the teacher should be permitted to develop his natural gifts rather than be constrained to follow conventional rules framed by alleged masters of pedagogy.

Dr. Wight's position was vigorously assailed by State Supt. Charles R. Skinner and Prin. A. L. Goodrich, of the Utica Free Academy.

PORTLAND, ME.—Prin. C. W. Wentworth, of the Bridge street grammar school, has tendered his resignation. Mr. Wentworth has been one of the most prominent school teachers in the city and has twice run for mayor on the citizens' ticket. He goes to Boston to edit a religious paper.

MOUNTAIN GROVE, MO.—Prin. William H. Lynch, of the Mountain Grove academy, subscribes to forty-four newspapers and school journals. There are very few school officials anywhere who do better than this.

BALTIMORE, Md.—The United Women of Maryland, pioneers in the opening of playgrounds for Baltimore school children, are very much upset by the refusal of the school board to grant permission for lectures and concerts in the school-house under the auspices of the society. The objections made were that some of the lectures might not be of a non-denominational character; that if one society were given permission to use school-rooms, others would rightly demand the privilege; and that the city does not need any outside help in its system of education.

NEWARK, N. J.—The architect of the new Millburn grammar school has fallen into trouble thru his passing upon a

piece of carpentry work before it was finished. The carpentry proves to have been finished in a most unsatisfactory manner and, as the carpenters' bill has already been paid, it is held that the architect is responsible and will have to see to it that the defect is made good.

SYRACUSE, N. Y.—The public schools have been ordered closed to the work of Mr. Willis Brown, of Chicago, who has been carrying on an "anti-cigarette crusade." It was the judgment of the board of education that his operations interfered with the regular running of the schools.

DETROIT, MICH.—Prin. O. G. Frederick, of the Washington normal school, has been appointed supervisor of grades under the direction of the superintendent of schools. He retains his title of principal of the normal school. A university graduate will be elected as vice-principal. Mr. N. H. Williams, teacher of physics at the Central high school, goes to the head of the physical department of the Indianapolis high school. H. D. Murchner, at present principal of the Niles high school, will succeed Mr. Williams.

COLUMBIA, MO.—The fourth annual session of the Mission Association of Affiliated Schools and Superintendents ended November 17. The association passed resolutions recommending that the entrance requirements to the university be increased from ten to twelve units.

WASHINGTON, D. C.—Trinity college for the education of young women of Roman Catholic families was formally opened November 23 amid circumstances of pomp and splendor. The dedicatory sermon was preached by the Rt. Rev. Mgr. Conaty, rector of the Catholic university. Many of the foremost prelates of the Roman Catholic church in America were present.

NEWARK, N. J.—The board of estimate has decided to request the town council for a bond issue of \$32,000 to erect and furnish a school building at Halstead street and Belgrave drive, and to purchase a site for a new school in the Fourth ward.

OAKLAND, CAL.—The Oakland board of health has passed resolutions condemning the practice in the schools of collecting and distributing daily the lead pencils used by the children. The practice is one that may easily spread tuberculosis and other diseases.

GRAND RAPIDS, MICH.—The scientific and natural history collection belonging to the Kent Scientific institute, which is delunct, have been presented to the board of education and accepted, with the proviso that the board shall not take possession until a certain attachment suit now pending in the superior court shall have been settled. The collection is one of very great value.

SYRACUSE, N. Y.—The application of twenty-five teachers in the Syracuse high school for an increase of salary, the maximum for women teachers running up to \$1,000 a year, has been denied by the school commissioners. The board was a unit in the decision.

UTICA, N. Y.—Supt Griffith has sent to the principals of his schools notification that the week of December 10-14 has been selected as Patrons' Week, and that Patrons' Day will be on December 12. Plans for the reception of patrons are called for.

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- Sug. 6. Send your friend The Perry Magazine a year. It will make the recipient glad ten times during the year. Monthly except July and August. \$1.00 per year.
- Sug. 7. Select three of the Perry Art Books in the Great Artist Series. Price, 35 cents each. (Three to one address for \$1.00.)
- SUGGESTION 8. Or four of the 25-cent Art Books. A choice gift.
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- Sug. 10. If your friend is interested in Birds, Animals, Minerals, Fruits, send our selected set of 50 Pictures in Colors. Price, \$1.00. Call it Pictures in Colors Set.
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- Sug. 13. \$1.00 for one set of 24 pictures of Forest Trees.
- Sug. 14. \$1.00 for our December Art Collection consisting of 25 Perry Pictures, Regular Size; 5 Perry Pictures, Extra Size; 5 Elson Prints; 10 Pictures in colors; 1 Souvenir Book. These are to be our own selection. Every one beautiful.
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New Books for Schools and Libraries.

This list is limited to the books that have been published during the preceding month. The publishers of these books will send descriptive circulars free on request, or any book prepaid at prices named. Special attention is given to all requests that mention THE SCHOOL JOURNAL. For Pedagogical Books, Teachers' Aids, School Library, and other publications, see other numbers of THE JOURNAL.

TEXT-BOOKS.

TITLE.	AUTHOR.	PP.	BINDING.	PRICE.	PUBLISHER.
The Lake Side Series of English Readings (The Merchant of Venice)	Shakespeare	112	Paper	.15	Ainsworth & Co.
The Lake Side Series of English Readings	Mary Kavanagh	136	"	.15	" "
Short Story Writing	Chas. R. Barrett	249	Cloth	1.00	The Baker Taylor Co.
Crito and Phaedo	Prof. Henry Morley, Ed.	192	Paper	.10	Cassell & Co.
Earlier Poems—Pope	" "	192	"	.10	" "
Paradise Regained	John Milton	192	"	.10	" "
America, 3 vols.	Joel Cook	592	Cloth	"	Henry T. Coates & Co.
Mrs. Browning's Complete Works, 6 vols.	Walter Rowlands	225	"	"	T. Y. Crowell & Co.
Among the Great Masters of Literature	J. J. Mora	212	"	"	Dana Estes & Co.
The Animals of Aesop	Hezekiah Butterworth	328	"	"	" "
Traveler's Tales of South Africa		23	Paper	.10	Fillmore Bros.
Christmas Recitations	A. H. Beery	7	"	.10	" "
Octavo Anthems		40	"	.25	" "
The Rostrum		64	"	"	A. Flanagan
Answers to Queries	Wm. Cleaver Wilkinson	320	Cloth	"	Funk & Wagnalls
French Classics in English	" "	327	"	"	" "
French Classics in English	" "	303	"	"	" "
Greek Classics in English—Preparatory	" "	302	"	"	" "
Greek Classics in English—College	" "	290	"	"	" "
Latin Classics in English—Preparatory	" "	312	"	"	" "
Latin Classics in English—College	Allen W. Gould	261	"	"	Ginn & Co.
Mother Nature's Children	Charles Lamb	120	"	"	D. C. Heath & Co.
The Adventures of Ulysses	Elias J. MacEwan	310	"	"	" "
Essentials of the English Sentence	M. V. O'Shea	66	Paper	"	" "
Eyes and No Eyes	Thos. M. Balliet	104	"	"	" "
Gulliver's Travels, Part I.	" "	112	"	"	" "
Gulliver's Travels, Part II.	Sarah M. Hiestand	102	"	"	" "
A Midsummer Night's Dream	Jessie H. Bancroft	506	Cloth	"	" "
School Gymnastics	M. V. O'Shea	61	Paper	"	" "
Six Nursery Classics	Walter Whitney Lucas	106	Cloth	.50	" "
Studies of Animal Life	Heinrich Geidel	129	Paper	"	Henry Holt & Co.
Wintermarchen	Johnson & Humphrey	67	"	"	J. N. Humphrey
Work with Words	M. G. Brumbaugh	351	Cloth	"	J. B. Lippincott Co.
Thinking and Learning to Think	Edwin A. Grosvenor	413	"	4.00	Little, Brown & Co.
Thinking and Learning to Think	" "	398	"	4.00	" "
Constantinople, Vol. I.	George Wharton James	341	"	3.00	" "
Constantinople, Vol. II.	William Henry Johnson	416	"	1.50	" "
In and Around the Grand Canyon	L. H. Bailey	355	"	1.10	The Macmillan Co.
The World's Discoverers	Edwin H. Lewis	579	"	"	" "
Botany	Mara L. Pratt	120	"	"	The Morse Co.
A Second Manual of Composition	Paul Carus	99	"	"	Open Court Publishing Co.
The Far East and the Far West	Edward S. Ellis	208	"	"	Penn Publishing Co.
Red Children	M. W. Morton	180	Paper	.30	" "
Eros and Psyche	Edward S. Ellis	237	Cloth	"	" "
Classical Dictionary	Edward Brooks	383	"	"	" "
Ideal Drills					
Plutarch's Lives					
Story of King Arthur					

LIBRARY AND MISCELLANEOUS BOOKS.

TITLE.	AUTHOR.	BINDING.	PRICE.	PUBLISHER.
Making a Life	Cortland Myers	326	Cloth	1.25
The Real David Harum	Arthur T. Vance	123	"	The Baker Taylor Co.
The Salt House Box	Jane D. Shelton	302	"	" "
Wit and Wisdom of the Talmud	Madison C. Peters	169	"	" "
Mother Wild Goose and Her Wild Beast Show	Edward S. Ellis	289	"	H. M. Caldwell & Co., Henry T. Coates & Co.
The Blazing Arrow	Harry Castlemon	395	"	" "
Carl the Traitor	John K. Kilbourn	379	"	" "
Faiths of Famous Men	Henry Ilowizi	408	"	" "
In the Pale	Horatio Alger, Jr.	363	"	" "
Jed, the Poorhouse Boy	Henry Ilowizi	360	"	" "
The Weird Orient	Chester Holcomb	386	"	Dodd, Mead & Co.
The Real Chinese Question	Gertrude Smith	99	"	Dana Estes & Co.
The Boo Boo Book	Sophie Swett	412	Paper	" "
Chatterbox		102	Cloth	" "
The Littlest One of the Browns	Laura E. Richards	385	Paper	" "
Little Folks Illustrated Annual	Eustace Williams	246	Cloth	" "
Rita	F. H. Costello	213	"	" "
The Substitute Quarter Back	Margaret Johnson	367	"	" "
A Tar of the Old School	Chas. H. Gabriel	81	"	" "
What did the Black Cat Do?	Palmer Hartsough	48	Paper	.30
All Hail to Santa Claus	Palmer Hartsough	15	"	Fillmore Bros.
Joy to the World	A. C. Barnes	16	"	" "
The Once-a-Week Club	" "	16	"	" "
The Search for Happiness	Palmer Hartsough	28	"	" "
Who is Santa Claus?	M. V. O'Shea	57	"	D. C. Heath & Co.
The King of the Golden River	Mrs. Ewing	74	"	" "
The Story of a Short Life	M. V. O'Shea	192	"	" "
The Wonderful Chair	F. I. Carpenter	412	Cloth	Henry Holt & Co., Houghton, Mifflin Co.
Selections from Byron	A. F. Brown	225	"	" "
The Book of Saints and Friendly Beasts	Frank Samuel Childs	328	"	" "
Friend or Foe	Chas. W. Chestnutt	294	"	" "
The House Behind the Cedars	Henry James	350	"	" "
A Little Tour in France	Estelle M. Hurll	94	"	" "
Sir Joshua Reynolds	Jas. T. Fields	410	"	" "
Yesterdays with Authors	Mrs. A. Little	424	"	J. B. Lippincott & Co.
Intimate China	Annie Payson Call	201	"	Little, Brown & Co.
Power Through Repose	James H. Baker	254	"	Longmans, Green & Co.
Education and Life	Andrew Lang	387	"	" "
The Grey Fairy Book	P. Leroy-Beaulieu	292	"	McClure, Phillips & Co.
Principles of Religious Education	Solon Hyde	389	"	" "
The Awakening of the East	A. Conan Doyle	478	"	" "
A Captive of War	Norman Duncan	168	"	" "
The Great Boer War				
The Soul of the Street				

Books Under Way.

Allyn & Bacon.

"Selections from Lowell, the Vision of Sir Launfal and other Poems," edited by Dr. F. R. Lane.
 "A German Method for Beginners," by F. J. Lange.
 Gerstaecker's "Germelshausen," edited by R. A. Minckwitz.
 Storm's "Immensee," edited by E. A. Whitenack.

Cassell & Company.

"The Story of the Chinese Crisis," by Alexis Krausse.
 "Among the Berbers of Algeria," by Anthony Wilkin.
 "In the Ice World of Himalaya," by Fanny Bullock Workman and William Hunter Workman.
 "Illustrated Book of Poultry," by Lewis Wright.

Ginn & Company.

"The Satires of Juvenal," edited by H. P. Wright.

D. C. Heath & Company.

"America's Story for America's Children, The Early Colonies," Book III., by Mara L. Pratt.
 Heath's Home and School Classics:
 Ingelow's "Three Fairy Stories" (C. F. Dole).
 Martineau's "The Crofton Boys" (W. Elliot Griffis).
 Melville's "Typee," Part I. (Trent).
 Melville's "Typee," Part II. (Trent).
 Motley's "Siege of Leyden" (W. Elliot Griffis).
 "Old World Wonder Stories" (M. V. O'Shea).
 Shakespeare's "Comedy of Errors" (Hiestand).
 Shakespeare's "The Winter's Tale" (Hiestand).
 Segur's "The Story of a Donkey" (C. F. Dole).
 "A Short Introduction to Biblical Literature," by Richard G. Moulton.
 "The Bird Book," by Fanny H. Eckstrom.
 "Law and Civil Government," by A. R. Taylor and L. B. Kellogg.
 "An Integral and Differential Calculus," by E. W. Nichols.
 "Famous Geometrical Theorems and Problems and their History," No. II., by William W. Rupert, C. E.
 "On Teaching Geometry," by Mrs. Florence Milner.
 Heyse's "Das Madchen von Treppi," edited by E. S. Joynes.

"Easy German Selections for Sight Translation," compiled by Grace L. Deering.

Hinds & Noble.

"A New Parliamentary Manual," by Edmond Palmer.
 "A Beginner's Latin Book," by J. C. Hoch and O. F. H. Bert.
 "Completely Parsed Vergil," Book I., by Archibald A. MacLardy.

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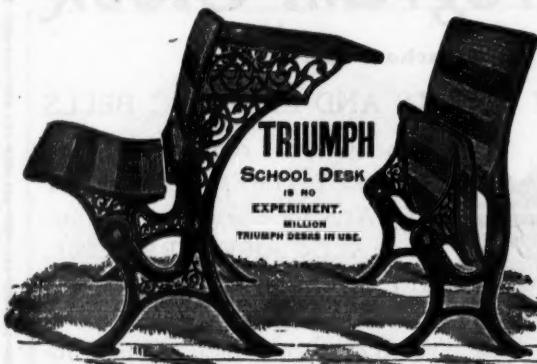
"Fact and Fable in Psychology," by Joseph Jastrow.
 "The Biography of a Baby," by Milicent W. Shinn.
 Riverside Biographical Series:
 "Benjamin Franklin," by Paul E. More.
 "Andrew Jackson," by William Garrott Brown.
 "James B. Eads," by Louis How.
 The Riverside Art Series:
 "Murillo," by Estelle M. Hurll.

The Macmillan Company.

"Child Life Primer," by E. A. Blaisdell.
 Schiller's "Wallenstein," edited by Max Winkler.
 "Source Reader of American History, I.," by Albert Bushnell Hart.
 Goethe's "Poems," edited by M. D. Learned.
 "Principles of Political Economy," Vol. II., Part II., by T. S. Nicholson.
 "Theory and Practice of Cookery," by M. E. Williams and K. R. Fisher.
 "Contemporaries, Volume III," by Albert Bushnell Hart.
 Chaucer's "Prologue and Knight's Tale," edited by M. H. Liddell.
 "Elements of Rhetoric and English Composition, First and Second High School Courses," in one volume, by George Rice Carpenter.

The Penn Publishing Company.

"The Story of King Arthur," by Edward Brooks.
 "Things Worth Knowing," by John H. Bechtel.
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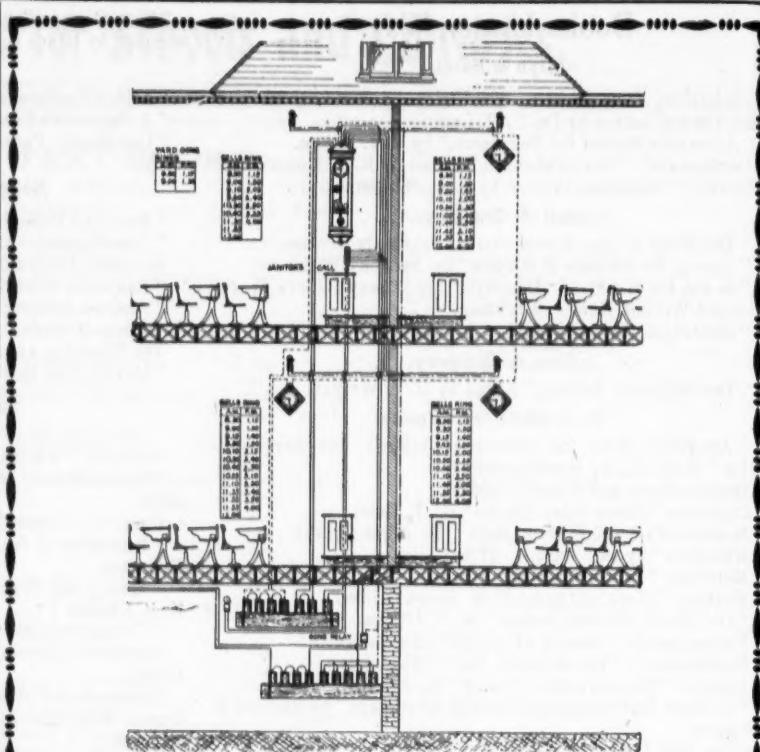
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 Arnold's "Sohrab and Rustum, and Other Poems," edited by J. B. Seabury.
 Ruskin's "Sesame and Lilies," edited by Agnes S. Cook.
 Goldsmith's "The Traveler and The Deserted Village," edited by Frederick Tupper, Jr.
 "Poets and Poetry of Indians," compiled and edited by Benjamin S. Parker and Enos B. Heiney.

Hinds & Noble have purchased from the Burrows Bros. Company the plates and copyright of the well-known 1001 Question and Answer Books and will hereafter publish them.

Little, Brown, & Company have issued a statement correcting the report spread by one of the New York papers that Miss Lilian Whiting is a convert to "Babism," a new Oriental cult. Miss Whiting was represented to have returned from Syria very zealous for the new faith. Now as Miss Whiting was never in Syria or in Egypt the falseness of the story is evident. Miss Whiting was born and lived in the Episcopal communion and had never heard of "Babism" until her return from Paris last summer.

"Conservative Humanity" is the title of an address by Mr. F. Cortez Wilson, reprinted from *Domestic Engineering*. It is a scathing indictment of the Conservatives who are now resisting the introduction of acetylene just as they have resisted the introduction of countless other boons to humanity. There seems to be no doubt that acetylene is the illuminator of the future.

The *New York Latin Leaflet* is a little monthly publication devoted to original research notes in classical philology. The managing director is Mr. David H. Holmes, of the Eastern District high school, Brooklyn; among the contributors are Profs. W. C. Lawton, Harry Thurston Peck, E. G. Sihler, J. A. Sanford, and G. M. Whicher. The internal purpose of the paper is to provide a clearing house for classical teachers in New York and vicinity or anywhere else; to afford an opportunity to younger classical scholars for the publication of their more modest endeavors along the line of original work which might not otherwise see the light; to stimulate classical work in the high schools of New York and vicinity. The external purpose is to establish one or more college-entrance scholarships for the most successful graduates from high schools in New York city. The proceeds over and above the expenses of publication will be devoted to a scholarship fund.



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THE SCHOOL JOURNAL.

587

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Bald McNally , N. Y. & Chi.	Eraser Holders.	American School Furniture Co., New York, Chicago	Berlin Photo Co., "
Baker & Taylor Co., New York	Morris & Dunham, Davenport, Ia.	Hammacher, Schlemmer & Co., New York	Perry Pictures Co., Malden, Mass.
H. Holt & Co., "	Charts.	Orr & Lockett, Chicago	
Jenkins, W. R. "	Silver, Burdett & Co., Boston	Phys. and Chem. Apparatus.	Stereopticons
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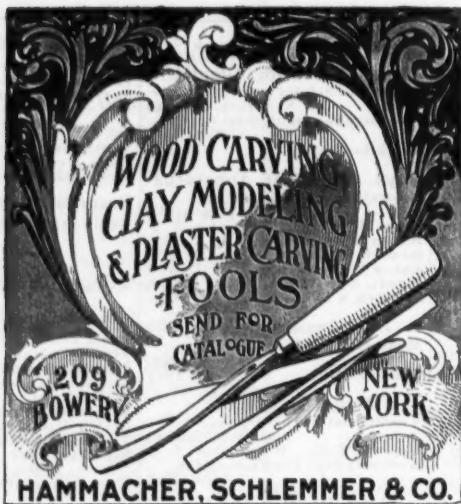
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Interesting Notes.

Webster's "Setting-Out."

A turning-point in Webster's career is thus described in the first of Prof. McMaster's papers on Daniel Webster in the November *Century*:

"Once there he set off, without friends or even letters of introduction, to find an office in which to study. The youth who had given his school to Ezekiel went along, and in the course of their search they presented themselves one day to Mr. Christopher Gore, told him that Webster was from the country, had studied law, had come to Boston to work, not to play, was most desirous to be his pupil, and asked that a place be kept for him till letters could be had from New Hampshire. Impressed by the presence and seriousness of the unknown youth, Mr. Gore talked with Webster awhile and when he was about to go said: 'You look as tho you might be trusted. You say you come to study, not to waste time. I will take you at your word. You may hang up your hat at once and write at your convenience to New Hampshire for your letters.' Describing the scene in a letter, Webster declares that when he was introduced by his friend, who was as much a stranger as he to Mr. Gore, his name was pronounced indistinctly, and that he was a week in the office before Mr. Gore knew what to call him. 'This,' he said, 'I call setting out in the world. But I most devoutly hope that I shall never have to set out again.'

Bankrupt Railways.

The number of railways in the hands of receivers on June 30, 1899, in the United States, was 71, there being a net decrease of 23 as compared with the corresponding date of the previous year. The number of railways placed in charge of receivers during the year was 16, and the number removed from their management was 39. The operated mileage of the roads under receivers on June 30, 1899, was 9,853.13 miles, of which 7,225.62 miles were owned by them.

Reptiles in Captivity.

The most striking single feature of the reptile house interior, in the New York "Zoo," writes Dr. W. T. Hornaday, in the November *Century*, is the alligator pool, which is another new departure in the keeping of saurians. The pool is 35 by 9 feet, and contains four feet of water, heated to 90 degrees F. On the farther side of the pool are spacious gravel banks, beyond which rises a dense maze of palms, Spanish bayonets, and other tropical plants, representing a living jungle. Leaning over the pool is a tree resembling a live-oak overgrown with tillandsias, orchids, and Spanish moss from Florida. A flood of light streams down upon the pool and its banks, the water is warmed by concealed pipes, and the six alligators are so contented that they have long since ceased to be vicious. Being properly warmed, they feed freely, grow rapidly, and are always ready for a meal. The largest specimen, called "Jumbo," now twelve feet six inches in length, has added six inches to himself since he was placed in the pool last November.

The St. Denis Hotel.

In another column will be found the advertisement of the St. Denis hotel, one of the oldest of the leading hotels in the city. It is situated at Eleventh street and Broadway, in the center of the dry goods district, and is surrounded by the principal publishers of text-books and miscellaneous books. One can find the leading educators and publishers at luncheon there every day. The cuisine cannot be surpassed and the rates are moderate. Lady teachers visiting this city before the holidays, or at any other time, will receive the best of care and attention.

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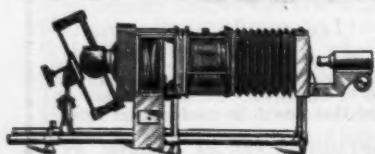
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Interesting Notes.

Genesis of the Diamond.

The "dry diggings" of the Kimberley district, in South Africa, afford the unique locality in which the diamond has thus far been found in its original home, and all our knowledge of the genesis of the mineral has been derived from study of this locality. The mines are located in "pans," in which is found the "blue ground," now recognized as the disintegrated matrix of the diamond. These "pans" are known to be the "pipes," or "necks," of former volcanoes, now deeply dissected by the forces of the atmosphere—in fact, worn down if not to their roots, at least to their stumps. These remnants of the "pipes," thru which the lava reached the surface, are surrounded in part by a black shale containing a large percentage of carbon, and this is believed to be the material out of which the diamonds have been formed. What appear to be modified fragments of the black shale inclosed within the "pipes" afford evidence that portions of the shale have been broken from the parent beds by the force of the ascending current of lava—a common enough accompaniment to volcanic action—and have been profoundly altered by the high temperature and the extreme hydrostatic pressure under which the mass must have been held. The most important feature of this alteration has been the recrystallization of the carbon of the shale into diamond.

This apparent explanation of the genesis of the diamond finds strong support in the experiments of Moissan, who obtained artificial diamonds by dissolving carbon in molten iron and immersing the mass in cold water until a firm surface crust had formed. The "chilled" mass was then removed, to allow its still molten core to solidify slowly. This it does with the development of enormous pressures, because the natural expansion of the iron on passing into the solid condition is resisted by the strong shell of "chilled" metal. The isolation of the diamond was then accomplished by dissolving the iron in acid—*Appleton's Popular Science Monthly*.

Astronomical Station in the Andes.

Within the last few years the Arequipa astronomers have established a station on the top of Mount Misti, Peru. This mountain is one of the highest of the Andes. It lies just back of Arequipa, standing out against the horizon almost alone in its grandeur, its top kissing the sky at an altitude of 19,200 feet above the sea. It is some thousands of feet higher than any point in America, and is a full mile higher than our observatory on Pike's Peak. It is by more than 3,500 feet loftier than any other scientific station of the world. The site of the station is on the edge of a huge crater, which now and then sends clouds of yellow sulphurous vapor a thousand feet into the air.

Mount Misti is an extinct volcano, but it is not dead, and it may at any time break out into eruption. At this great altitude, nearly four miles above the sea, the Harvard men have now the finest of scientific instruments for registering the conditions of the atmosphere, the velocity of the winds, the pressure of the barometer and other conditions. The instruments are, of course, automatic, running for three months without being touched. No one could live at such an altitude, and the scientists go up only periodically to get the records and rewind the instruments. As it is, the trip is a very hard one. Some of the men get soroche or mountain sickness, and many men cannot make the trip at all. The observatory has other stations on the sea near Mollendo, and at Cuzco, the famed capital of the Incas, which is a little more than 100 miles from Lake Titicaca. The founding of this wonderful work was done by Prof. W. H. Pickering and Solon I. Bailey, of Harvard, the most of the



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stations being established by the latter. Prof. Bailey has just returned to the United States, and the observatory and its stations are now in charge of Mr. W. B. Clymer, of Ohio, and Mr. DeLisle Stewart, of Minnesota.

Long-lived Folks.

Because one's parents and grandparents lived to be nearly one hundred does not make it certain that their descendants will do likewise, for the inheritance of vitality may all be dissipated in twenty years of high living. A small stock of vital force well taken care of may last twice as long.

People who are long lived all have certain physical traits that are not noticeable. In the first place they have straight backs. The majority of folks have curvature of the spine in some degree: unnoticeable it may be, but it is there. The man who will live to be old has a straight back, holds his head up, and has a broad, deep chest. This means that the vital organs are not crowded and perform their functions unimpeded.

Usually with long-lived folks the trunk is long and the legs short in proportion. The habit of deep, slow breathing also belongs to this section of the human race. A calm nature is necessary, too, for a person always in a flutter, either with rage or joy, wears himself out. Easy motions and a light step with muscular relaxation, are other characteristics.

Those who live long are always small eaters. The enormous task the liver and stomach of a gourmand have daily is too much for any system.

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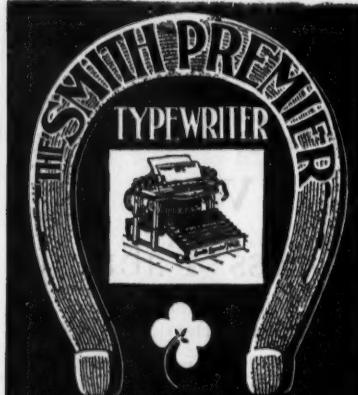
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